



REPORT

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‘Scattered and fragmented’

TVET and skills engagement in sub-Saharan Africa

Report for the IDRC

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1. INTRODUCTION AND OVERVIEW

1.1. *Aim and approach of this report*

This report aims to identify and support strategic research and interventions in the vocational skills development space, to improve support for youth to access labour markets and sustainable livelihoods, in the context of digitalization and the transition away from carbon-based economies. This matters, because the continent is littered with interventions and reforms, with little evidence of what seems to make a difference to whom. In the youngest and poorest continent, education and training seems dislocated from economic development and employment creation. This despite a widely expressed policy intention of technical and vocational education and training (TVET) being integral to solutions to youth unemployment. The limited data systems across sub-Saharan Africa makes even developing a descriptive picture of formal technical and vocational education and training provision systems difficult. This also makes both management of systems and substantive research difficult.

Research is being conducted, and the field is starting to grow. But much of it is sporadic and scattered, covering different topics in ways that are not located in a sense of how the different parts of the system are working or the extent to which they are realizing intended objectives. Many organizations and governments are spending resources on research and evaluation, but in the main this is not contributing to clearer overall insights, sometimes because reports are not made publicly available, but also because they often study isolated projects or interventions, or a few aspects of a phenomenon without locating it in its broader context.

Much more, and much better research is urgently needed, and support is needed to improve data systems and analysis.

The report provides a mapping of what information and data is available, and what research has been conducted, examining vocational skills development broadly, and TVET in specific, on the sub-Saharan continent. The report presents an integrated set of findings and clear proposals for priorities to strengthen the ways in which research supports policy and implementation in the region, with a view to supporting strengthening TVET and skills development for youth employment and livelihoods.

In conducting this study, we looked for:

- descriptive data about formal TVET systems and current reforms being taken forward by governments, as well as about the types of projects and interventions donors and development partners are making in different countries on the continent.
- evaluative data about vocational skills interventions and projects, that provide insights about the investments¹ and interventions that have been made in vocational skills development across the region; the roles of different actors within them; and engagement with training institutes and employers. We also looked for evaluative data about the outcomes and where possible impact realized through these interventions. We also explored the limitations of available evaluations.
- other research literature that analyzes formal TVET systems in specific, and vocational skills development more broadly, across the continent or in specific countries. We also extrapolated insights about research gaps.

To analyze this diverse set of data, information, and insights, we used two main conceptual frameworks: theory of change (as a theoretical frame in evaluation); and institutional political economy as an approach to understanding skill formation systems.

1.2. Background: economic context

Sub-Saharan African countries face the enormous challenge of preparing young people for a world of work that is rapidly changing. This is in the poorest and youngest region in the world. It is the only region in the world where the absolute number of poor has increased since 1990 (Bashir *et al.*, 2018). Twenty percent of the world's under 25 population live in sub-Saharan Africa (Brown and Slater, 2018). Some countries have made the 'fertility transition', (Botswana, Lesotho, Swaziland, urban Kenya, and urban Ethiopia), but many still have some of the highest fertility rates in the world—notably Angola, Mozambique, DRC, Congo (Brazzaville), and Cameroon (Cramer, Sender and Oqubay, 2020). Agriculture constitutes the primary source of survival for the region's working age population but deagrarianization is accelerating. Most of the working population still lives in rural areas, but a rapid process of urbanization is taking place in many countries, placing an additional burden on governments to provide adequate infrastructure, services, training, and jobs (UNICEF, 2023).

The sub-continent faces many economic crises, from the aftermath of the COVID-19 pandemic to the effects of the climate crisis. Sub-Saharan African countries are vulnerable to climate crisis because effects are likely to be severe and because so many people still depend on subsistence agriculture. This and violent conflict (the highest in the world between 1989 and 2017 in Rwanda, Ethiopia, DRC, Sudan, and Nigeria (Cramer, Sender and Oqubay, 2020)) is leading to increased internal and international migration, which affects labour markets and training systems. 'Brain drain' has been a well-established phenomenon in Africa for decades (Docquier and Ifikhar, 2019).

¹ By investments, our focus was on the nature and aim of interventions, and not on the actual nature of expenditure, which we suggest might be useful as part of a separate value for money exercise that is beyond the scope of this assignment.

There is significant uncertainty about whether increasing digitalization of much work internationally, as well as the global imperative to decarbonize economies, will further entrench the region's subordinate position in the global economy or offer possible routes to overcoming it. African governments hope that the transition to a digitalized and decarbonized economy will offer new opportunities for countries to move up the chain of value addition, improving incomes and wellbeing (African Union, 2020b). But Nyabola *et al* (2018) argue that although the reach of digital technologies has expanded, to-date this has increased the ways in which the continent is a site of extraction of natural resources, labour and rents. Agenda 2063, the continental long-term strategy for economic development, has seven aspirations which aim at 'Building an integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the international arena'. But recent economic developments are described as having 'extraordinary variety and contradictory characteristics' both 'across and within African countries' (Cramer, Sender and Oqubay, 2020, p. 8).

The sub-continent faces a challenge of increasingly educated citizens and little structural change in economies and labour markets. This seriously questions the emphasis on skills interventions as the main form of intervention to address employment.

A World Bank publication argues that economic growth and development are not strongly correlated with educational enrolment in many African countries: 'there is little association between a country's knowledge capital and its subsequent economic growth' (Bashir *et al.*, 2018, p. 56) and 'In some extreme cases, countries with similar "knowledge capital" as measured in 2000 differed widely from each other in terms of GDP per capita growth over the ensuing 15 years (p. 57). As Allais (2020) points out, there are stark differences between categorizations of industrialization, growth, development, and poverty reduction on the one hand, and rising educational enrolments on the other. She summarizes a World Bank report (Arias, Evans and Santos, 2019) that categorizes countries by income group and level of structural transformation; an UNCTAD report that categorizes countries by levels of industrialization in 2010 and industrial growth performance from 1990-2010; a more recent report that groups countries by levels of industrialization (Newman *et al.*, 2016)²; and another 2016 categorization of 16 sub-Saharan African countries in terms of economic growth (Arndt, McKay and Tarp, 2016).

All of these typologies of development and industrialization, different as they are, are also different to a typology of educational expansion in a recent World Bank report on education in sub-Saharan Africa (Bashir *et al.*, 2018). What is clear is that there is little correlation between the countries with the most established education systems and the countries with the strongest economic performance, improved industrialization, or labour market absorption. Only Ghana and Kenya show some degree of consistency in terms of the relationship between economic development and educational enrolments. By contrast Ethiopia, with very recently rising levels of primary enrolments and remaining high levels of out-of-school youth, and Senegal, one of the worst performers in the World Bank's education groups, are described as 'stars of growth'. In contrast, South Africa and Zimbabwe have well-established education participation rates, but stagnant economies. Botswana and

² Although they caution that the 8 strongest economies are not emerging industrial economies

Gabon, two small and relatively wealthy African countries, also have established education participation but very high levels of inequality. All of this suggests that relationships between so-called ‘climate of investment’ conditions, industrialization, growth and poverty reduction, and education levels, are inconsistent on the African continent.

In this context, weak insight into the role of TVET and skills interventions remains an ongoing challenge. It is not clear what roles can be played by TVET systems, nor how best to support them to play these roles. Many policy documents and reports describe similar challenges over decades, with little systemic improvement seen, even as education levels have risen dramatically (African Union, 2007, 2018, 2024). This report attempts to map a way forward for supporting research that can improve insight into how TVET and skills can better support people to access and excel in work, in the context of climate crisis and a rapidly changing world of work, in the youngest continent of the world.

1.3. Overview of the report

The report starts with our high-level analysis across the various research and data sources considered, and our high-level recommendations for research and intervention priorities.

This is followed, in section 3, by a detailed description of how we conducted this study—the different sources of data considered, and analysis conducted. This is presented in detail because the process and difficulties of obtaining data are significant for the recommendations. Section 4 then presents the research findings: an overview the key challenges facing TVET and skills on the continent; an overview of systems and reforms; and an analysis of what data is and is not available. It then considers the state of evaluative work on the continent, followed by an analysis of the limitations of data sources and research. These findings present the basis for the analysis and recommendations presented in section 2.

The report contains four Appendices that provide more detailed information, which will be of use in planning specific interventions, and for researchers seeking more depth on particular topics:

Appendix 01: Overview of research papers provides two lists of recently published research. One list, from TVET journals, including abstracts.

Appendix 02: Overview of evaluative studies, provides an overview of research and evaluations into TVET and skills interventions in sub-Saharan Africa. It considers their methodology and the nature of their findings.

Appendix 03: Overview of systems and policies provides an overview of descriptive information easily available on what systems look like.

Appendix 04: Overview of interventions and projects provides an overview of interventions by donors and development agencies.

2. ANALYSIS AND RECOMMENDATIONS

We start with a summary of our diagnosis of the field, and then move to some key recommendations for priority interventions.

2.1. Analysis

The two biggest challenges facing TVET and skills systems in all countries in sub-Saharan Africa are helping young people to access labour markets, and supporting people who are at risk to re-skill and access other opportunities, because of loss of livelihoods due to climate change and decarbonization imperatives, as well as digitization. But provision and regulatory systems and institutions are weak and inflexible.

In the research into these systems, there are so many knowledge gaps about TVET and skills in sub-Saharan Africa that it can seem bewildering. And many of the problems described in research literature are well-established and much lamented—like weak labour market relevance. Many of the reforms, in terms of structures, funding modalities, and curriculum/qualification reform, seem to have been attempted repeatedly, with little improvement to systems. The substantial gaps in data and unavailability of clear and up-to-date descriptive data as well as systems for collecting, managing, and analyzing such data, is the first striking problem—with no systematic data available for enrollment and completion across different types of programmes. Labour market intelligence is equally weak and sporadic in most places.

From a research and analysis perspective, we diagnose the overall problem as one of very little coherent, systemic research. While the field has slowly grown, there are only patches of ongoing systematic research. Most research papers are scattered, once-off, and not in TVET-focused journals or even journals focused more broadly on education or work. This underpins the absence of a clear analysis of the theory of change in many reforms and interventions designed to ‘strengthen’ TVET. The problematic is often not well described, and interventions not well formulated, because TVET and skills interventions are frequently developed in a vacuum outside of the political and economic context in which they exist.

TVET and skills are inherently inter-disciplinary. There are many different aspects to thinking about what kinds of TVET are required, what is required for African countries to develop meaningful TVET, as well as the possibilities of escaping low skill low wage traps:

- One is the economic and social systems in which TVET systems are embedded. This includes macro-level patterns and relationships: how skill formation systems are shaped by, and shape, the societies and economies in which they exist. It includes understanding the economic and social development trajectory of a country, and nature of labour markets—how equal or unequal they are, how regulated they are, and so on. It also includes understanding the labour process: work organization and production regimes in companies, or the nature of daily work for own-account-workers.
- It also includes the broader nature of education and training systems—who can access what kinds and levels of schooling, at what cost, at what quality, and who succeeds—are key factors that strongly shape both what is possible in TVET, and also, the likelihood that people will want to enroll for TVET programmes, and will succeed in them.
- And it includes educational theories of knowledge, expertise, and skill—both in terms of what constitutes bodies of expertise as well as theories of learning and acquisition.

Support to research must focus on what would build a systematic and coherent field of knowledge in an under-researched area that has often been stigmatized in educational research, and haphazardly researched in other disciplines. Without a systematic body of knowledge that starts to put these different pieces of the puzzle together, we are likely to have endless ‘what works’ studies that tell us very little, and endless reforms with no clear insight into what they have and have not achieved.

Institutional capacity for research is clearly very lacking on the continent. A few focused centres have started to build coherent research programmes drawing on different disciplines and are starting to build the field in pockets. These should be supported as far as possible and encouraged and supported to work with each other as well as with individual researchers across the continent. The devastation of research capacity on the continent as a result of rapid massification of university systems without accompanying funds, and funding models that forced lecturers to take on additional intakes of students or consulting work to make up lost income, have had a terrible effect on the continent. This will be difficult to turn around without sustained support from the international community as well as governments and donors in countries.

Many countries are trying to focus on labour market intelligence—and there are useful guidelines in this regard (ILO, 2015, 2017, 2019). Countries will need much support in operationalizing these. But we also need to acknowledge that improving these systems is a long-term endeavour, expensive, and, won’t lead to silver bullets in TVET improvement. It doesn’t help to constantly be doing research for specific changes as they come up, such as the massive focus on green economy that is being supported in many countries. In other words: ‘what skills are needed for X?’ is a relevant question for specific research projects in specific countries but will be of limited value systemically. Similarly, ‘which labour market intelligence tools should we use’ is a question that has many toolboxes and guidelines already answering—without much effect. Rather, we suggest that the IDRC should support research into the broader trajectories of labour markets in the short to medium term, in the context of the nature of economic development, the nature of labour markets, the broader education and training system, and different time horizons. Countries themselves need to build capacity for more specific labour market intelligence systems and analysis, particularly for longer term skills needs, and they need to find creative approaches to supporting institutional capacity for providing training to meet short term skills needs.

2.2. Key priorities for research and intervention

We emphasize the need to build a knowledge field that is systemic and not ‘scattered’. This relates to the kinds of research that are supported, as well as building institutional research capacity. We are not suggesting that only large research projects that attempt to do everything should be supported, but that research interventions need to be designed so that they start to build more systematic pictures. This is partly related to institutional capacity of centres of gravity of research—whether focused research centres or academic departments that are building capacity to do research in this area—and partly related to how research is conceptualized. We also emphasize the need to support data systems and systems that collate and make accessible data across countries. This requires an agreement on a consistent set of indicators that countries are supported to collect, analyse, and use for learning, and support to thinking through how to present and organize information across countries to support insight and analysis.

2.2.1 Building more systematic research with more systematic theory

We suggest that there is need for research at three key levels: macro (national and international); sectoral or occupational level; and local economic development level. In each of these, there needs to be a focus on different bodies of theory. There are many cross-cutting theories that are essential for understanding TVET and skills; we list some core ones.

At a **macro level**, what is needed is more research into skill formation systems. This means TVET and skill systems in terms of how they are embedded in economic development trajectories, national (formal and informal) and international labour markets, and education and training systems. This could include a focus on national policies and systems—but what needs to be avoided is the kinds of descriptive overviews that already exist, and don't actually explain that much. This type of research could include an analysis of which actors are able to exert control to effect change that will address problems facing TVET.

At a **sectoral level**, more insight is needed into company needs and dynamics, modes of provision that really work for different types of companies, and the skills implications of dominant production regimes and work organization systems.

At an **occupational level**, there may be different types of focus in formal and informal labour markets. In the former, formal labour markets, we need more insight into how labour market regulations as well as other regulatory, social, cultural, and economic institutions classify, protect, fragment, or casualise occupations. How occupations are understood and organized, what kinds of vocational and professional programmes are offered, and what mechanisms regulate occupations in the labour markets, are also important. In the latter, informal labour markets, more insight is needed into different occupational groupings, in terms of whether or not there are implicit norms and understandings that could be built on to develop a license to practice; how workers understand the occupation; what their notion of occupational identity is; what codes of practice and standards they see themselves as upholding; and so on. This would enable insights into where and how the occupation could be strengthened. All of this is important because TVET doesn't make sense outside of occupations and occupational streams—it is difficult to develop substantial programmes of learning aimed at preparation for work without clear bodies of expertise and skill that relate to specific occupations or groups of somewhat cognate occupations.

At a **local level**, we need insight into local economic development, local skill formation systems, and how people can be best supported to develop livelihoods aligned with trajectories of building and developing communities. This focus on local skills ecosystems should explore what may catalyze skills formation at local levels and the conducive environments that foster and promote the nourishment of skills interventions. Within this, research should consider community-based interventions, and how best they can be supported, as well as how small and micro enterprises can be supported to play a role in local economic development. The role of TVET colleges, institutes, and centres, as well as other education institutions, and their potential to support TVET graduates, should be considered, as well as what kinds of institutional capacity building they would require. In other words, research should develop an understanding of relationships between education providers, employers, and individuals in small (municipal, city, or village) geographical areas and find leverage points to foster institution building and better relationships.

At all three levels, cross-cutting bodies of theory include

- Just transitions—the theories in this regard as well as likely trajectories of economic and social development as countries engage with the imperative to decarbonize.
- Institutional political economy—factors that shape the supply and demand of skills (understanding demand two ways as demand from consumers of education and demand from hirers of skills)
- Education theories—curriculum, pedagogy, teacher training
- Institutional theory, systems theory—what drives institutional growth and development, how institutions can be strengthened.

What is also needed is ways of bringing these different bodies of theory and knowledge together—what are the key concepts? For example, the idea of ‘occupations’ incorporates both ideas about curriculum (bodies of expertise), pedagogy (how and where learning takes place), labour markets (how occupations are regulated, divisions of labour within and between occupations, the likely growth or shrinkage of particular occupations or occupational change) and even, labour process—the ways in which work is organized in different occupations. While not every study can be located in all aspects of social theory, a focused consideration of how they contribute to the broader ideas will help to build a more coherent body of knowledge.

There is a role for building repositories of descriptive data about African TVET and systems. The sub-Saharan continent clearly lacks systematic repositories of information about African TVET and skills systems—by contrast with European countries, with extensive data, but also, with Latin America, where national Vocational Training Institutes have much more complete information about their systems, providers within them, and learners on different programmes. For this scoping report, we sourced information from three different sets of repositories, as discussed below, that have attempted to provide overviews of national systems. While all three provided much useful information, as is seen in the discussion in the findings section, they go out of date fast. Further, the information presented is hard to compare across countries and reads as atomized and dislocated at times. The ILO has an African ‘skills hub’ <https://www.ilo.org/topics-and-sectors/skills-and-lifelong-learning/ilos-africa-skills-hub> which contains information about many aspects of skills and TVET in Africa, including a list of interventions from donors and international agencies. What is essential is a more systematic ‘TVET and Skills Observatory’ that provides an overview of systems and research insights. The most appropriate hosting for such an observatory would be an African institution—particularly the African Union, working with other key organizations (such as the ILO) and research centres. Such an initiative would need to be supported and thought through carefully, so that portals and websites can be built that give accurate and useful information across countries, and remain up-to-date. It would also require a network of focal points, which the AU is in a good position to coordinate, but which would require support from research institutions, other Africa-wide institutions, and international agencies.

2.2.2 Building institutional research capacity

All of this requires much stronger institutional capacity, both in terms of research institutions such as universities and independent research organizations, and the capacity of government agencies to collect, maintain, and analyze data systems.

For the former, building independent institutional research capacity, the continent needs more research institutions that can generate knowledge over time, and build broader insights that build on each other, as opposed to once-off studies and consultancy reports. Those centres and departments already making headway in this regard need support and strengthening, and, perhaps, potential areas for building new ones could be identified. Insights from what has worked, and challenges faced in building research capacity, from organizations like the Human Science Research Council, the Centre for Researching Education and Labour, and the Institute for Post-School Studies, should be explored. Projects that pair established research centres with emerging ones, or even departments that have some ‘centre of gravity’ in terms of a focus on TVET and skills, with similar methodologies across research in different countries, may help both to build insights and capacity. Supporting researchers to enrol for training programmes, such as the *Masters in Education and Work* offered by the Centre for Researching Education and Labour at the University of the Witwatersrand, could be part of building greater policy and research capacity in this field. Finally, conversations and engagement between researchers is important, and space for researchers to share what they are doing in the continent, through regular webinars or other online knowledge sharing events should be supported. The Crossing Boundaries conference, an important conference that focuses on vocational education research, will be held in South Africa in 2027, the first time it has ever been held outside of Europe, and support for African researchers to attend this type of conference is important.

For the latter, building state data systems, government agencies and Africa-wide organizations and institutions need to be supported to work together more, and synthesize insights and projects. Government agencies need to develop better insight into the numbers accessing and completing specific programmes, what they are achieving and how people are moving through and across systems. This also includes labour market data systems designed for the African context—considerable support may be needed to build, carry out, and analyze better labour force surveys. African governments have limited capacity, and where research could assist is in thinking through how to design, manage, institutionalize, and analyze data systems that can then be used to support evidence-based decision-making. It is noted from this research that some regional structures, such as SADC, are seeking to play this role. Ways to bolster their capacity to play this role could also be considered.

Continent-wide, there are many active and important organizations. Key are the African Union (AU), the African Union Development Agency-NEPAD, the Association for the Development of Education in Africa, and the African Development Bank. Key international organizations include the International Labour Organization, the GiZ, and the Mastercard Foundation. All of these organizations have various initiatives that relate to or support TVET and skills in different ways. Under the leadership of the AU, bringing them together, with key research organizations on the continent, is an important first step in building more joint analysis and coherent strategies and interventions. One component of this could be the development of an African TVET and Skills Observatory, hosted by the AU, and built and conceptualized with other Africa-wide organizations as well as research organizations and international agencies.

2. APPROACH TO THE SCOPING REPORT

This study was a complex one, as we were researching an area that is poorly understood and poorly studied. We therefore provide a more detailed description of how the sources of data for the study, as well as how the analysis was conducted. As mentioned above, data was drawn from four main sources:

- research about TVET systems on the continent;
- evaluative data about the outcomes of interventions in the area of TVET and vocational skills development;
- descriptive data about TVET systems
- review of donor and development agency interventions.

Below we describe how we gathered the data in each of these.

2.1. Review and overview of published research literature

The review of research had three aims: firstly, to gather what is known and what the main challenges identified by researchers are; secondly, to develop an overview of the field of research; and thirdly, to develop a list of active researchers. To attempt to achieve all of these goals, we searched for published research in a number of different ways.

Noting that vocational skills development in Africa is not highly researched by academic researchers, this was supplemented by grey literature and technical reports where they could be obtained.

We also did keyword searches of academic research data bases, and an analysis of the most well-known vocational education journals, considering their references and citations, as well as journals focused on education and development. This allowed us to see how the extent to which TVET and skills are researched, and the kinds of research that comes up. We argue that what this search produces is of more value in a meta-analysis of research than in understanding TVET and skills as phenomena in society, economics, and labour markets. The dataset we collected from keyword searches comprised approximately 900 journal articles authored by roughly 1,500 individuals, focusing on skills development and Technical and Vocational Education and Training (TVET) in Africa from 2019 to the present, sourced from google scholar, and analyzed and summarized by author, journal, publisher, publication year, and country affiliation.

We also read systematically through back editions of key education journals from the past five years, looking for research from individual African countries or multi country studies, as well as studies that could have a bearing on understanding TVET in African countries. This approach enabled a broader consideration of the literature than what is obtained through a keyword search. As part of this step, we attempted to determine which universities, researchers, and research institutes are actively engaged in this field, along with the specific projects they are undertaking. *Appendix 01: Overview of research papers* provides a list of papers from key journals, with abstracts, and a spreadsheet of papers, as well as a snapshot of researchers.

We also considered metareviews of research that attempt to provide a comprehensive overview of research into African technical and vocational education and training (TVET) systems. One is a literature review in the *Journal of Vocational Education and Training* (McGrath *et al.*, 2019); the second is a review of TVET research in sub-Saharan Africa commissioned by the German government which examined studies between 2000 and 2022 (Haßler, Björn *et al.*, 2020). Other continent-wide studies of TVET systems that include overviews of the research literature (as opposed to focused on specific aspects of TVET) were consulted (Arias, Evans and Santos, 2019; Allais *et al.*, 2022; Allais, 2023a; International Labour Office and African Development Bank, 2023).

We explored databases such as <https://essa-africa.org/AERD>³ which is a collection of educational research on Africa, although it has relatively few publications on vocational education and skills, and of these, mainly older, and focused on individual institutions. It is not clear how the data base is updated, as it contains nothing since 2022. Through this process we also found some names of active institutions and researchers in the region in this field.

2.2. Review of evaluations

We conducted an analysis of evaluative work done on the continent. This was with two aims: firstly, to understand what is known about the kinds of differences that TVET and skills interventions are making; secondly, to understand the kinds of evaluative work that is being done on the continent.

We conducted an analysis of metareviews of youth employment programmes, both internationally and in sub-Saharan Africa. This focused on 14 international meta reviews, all of which reviewed the findings of evaluations focused on Active Labour Market Programmes (not all are exclusively on Africa, but all include reviews of interventions in Africa). These metareviews explored the efficacy and impact of various interventions that have been implemented to enable young people to transition into the labour market. All of the metareviews highlight the ways in which, and the extent to which, different forms of active labour market programmes, including education and training, enable transitions into work. The meta reviews also speak to the limitations of the designs used by many evaluations, which limits the credibility of their findings.

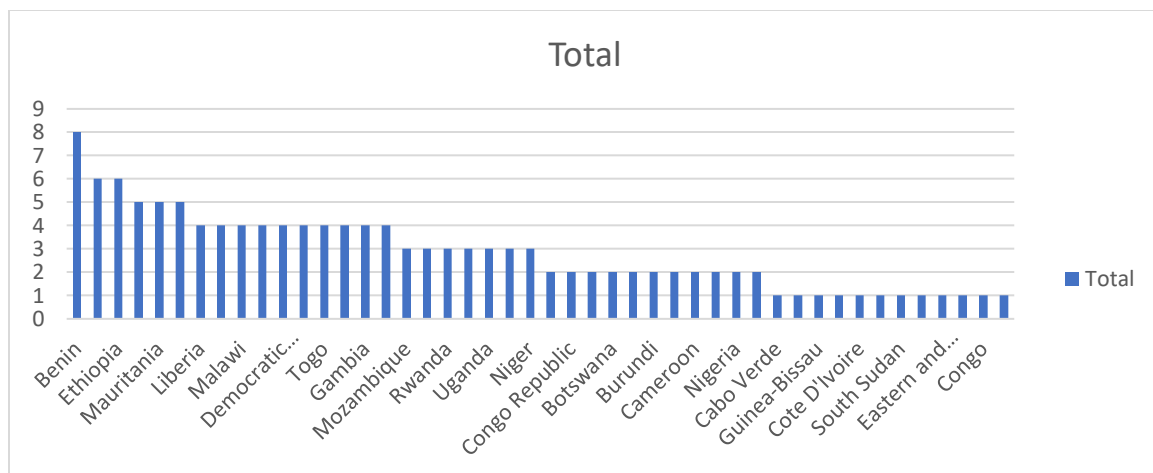
We then looked for interventions, projects, programmes, and activities of donors and development agencies. One aim here was to understand the main types of interventions and large projects currently underway or recently completed, the main actors, and what their focus is. We were also interested in whether, and to what extent evaluations have been conducted, and what kinds of evaluative findings are available. This second point is crucial for understanding where the main knowledge gaps are in this area. We examined donor and development agency websites as well as country websites. Our aim was to understand the strategies, focuses, and impacts of these efforts, particularly in addressing youth unemployment, workplace transformation, and employer engagement with TVET systems. We obtained information for over 131 projects, spearheaded by 20 donor agencies, across 45 countries. We assessed them for focal areas, and also looked at emerging themes such as entrepreneurship, institutional capacity, primary production, and green jobs. An overview is

³ Accessed in February 2025

contained in *Appendix 04: Overview of interventions and projects*. In terms of evaluations, many projects are ongoing and so most of the associated project documentation were internal monitoring reports, rather than impact evaluations (apart from a few baseline and mid-term evaluations). We therefore also reviewed the evaluation databases of development agencies and similar organizations. Given the structural differences across databases, including variations in filtering options, the search strategy was adapted accordingly for each database. Whenever possible, date and location filters were used as the primary selection criteria. Titles and abstracts (if available) were then reviewed to identify relevant evaluations for further analysis. When regional filters, such as ‘Africa’ or ‘sub-Saharan Africa’ were available, they were utilized. In cases where only country-specific filters were provided, searches were conducted on a country-by-country basis.

Some databases included category filters, which allowed for further refinement by selecting categories related to education, skills development, and labour markets. For the databases without sufficient filtering options, a keyword-based search strategy was employed, using terms such as ‘skills’ OR ‘training’ OR ‘vocational’. When systematic evaluations or reviews were identified, their references sections were examined to uncover additional relevant studies. *Appendix 02: Overview of evaluative studies* contains a list of the studies, as well as an overview of their methodology and the nature of findings that they produced.

A full list of databases consulted is outlined in the third annex to *Appendix 02*. The research was conducted in January and February 2025; during this period, the USAID evaluations database was unavailable.



We examined the evaluations through three lenses: changes experienced by targeted individuals; institutional changes; systemic changes. These are discussed in more detail below.

With regard to changes experienced by the **individuals** specifically targeted by the project being evaluated, we considered **individual labour market outcomes** (including changes in skills, changes in credentials, changes in employability, changes in job placement prospects, changes in earnings, changes in job search costs, changes in work integrated learning opportunities, changes in employment) and **individual non-labour market outcomes**

(including psychosocial impacts e.g. increase in confidence, sexual and reproductive health, and other individual outcomes).

We also looked for information about **broader labour market outcomes**, including broader employment and economic shifts or changes at a sector or industry level that could have been influenced by the programme/intervention. This could include changes to the employment rate, changes to wage levels, changes to the size of a particular sector.

Regarding **institutional outcomes**, we looked for information about changes to training providers, employers, institutions involved in skills development/employment etc. We looked for things like, changes to quality of skills development /employment programmes at an organisation(s); changes to accessibility of programmes/institutions; changes to capacity of organisations; changes to public/private partnerships or engagement; changes to employer recruitment patterns; changes to relevance of programmes to skills needed by industry; or changes to quality assurance bodies, regulatory bodies, or funding bodies.

Regarding **systemic outcomes**, we looked for any insights into structural changes in the labour market, industry, skills system, and so on. We looked for any distinctions between systemic-economic and systemic-education where possible, including insight into changes to policies; changes to economic growth; changes to systemic barriers; changes in the economy; changes in the skills formation system or education provision system; changes in equity/inclusivity.

2.3. Policies and system review

African TVET systems do not have single sets of data and information readily available.

We reviewed policy documents, reports, and reforms at a sub-regional and national levels. To obtain an overview of systems, we started with UNESCO *Country TVET Profiles*, the ASPYEE *Country TVET Profiles*, and ILO *State of Skills* country profiles, where these were available. Thereafter other sources were sought: UNESCO, ILO, African Union, World Bank and African Development Bank websites, as well as country government and other websites. This component of the desktop review also included a review of broader relevant policies and reports such as economic development plans where they engage with vocational skills development as the crucial context for the research, as well as statistical information about TVET as far as it is available. We captured this in a matrix (attached as *Appendix 03: Overview of systems and policies*, which allows for an analysis of similarities and differences across sub-Saharan Africa).

Many governments in African countries have been reviewing their systems, developing new strategies, and implementing targeted reforms. Where documentation is available explaining reforms and strategies, we reviewed these as well, although, it proved a difficult exercise as so many remain at the level of policy aspiration. The process of collecting the information started with a focus on Anglophone countries, moving on afterwards to those that are not Anglophone. The information was compiled per country in the spreadsheet in *Appendix 03* labelled 'Country TVET Information'.

2.4. Validation and stakeholder engagement

Using an analysis and preliminary recommendations from this detailed analysis of available information, evaluations, and research, we developed a set of key priorities for research.

These identified priorities were tested through focused engagement with selected stakeholders.

2.5. Definitions

We use the term ‘vocational skills development’ to signal a broad approach to considering educational preparation for work, including informal training programmes, skills interventions, on-the-job training, and formal TVET provision.

The term TVET usually refers to formal provision of secondary level education and training aimed at preparing learners for work in what are generally regarded as mid-level skills occupations (Oliver, Yu and Buchanan, 2019). This may include a year or two of post-secondary provision but excludes degree-level professional education. Definitions vary from country to country, so that what is classified as TVET in one country is not necessarily the same in another. This means, for example, that when school enrolments are disaggregated, it is apparent that about 50% of school students in Egypt are doing technical secondary school, which in some contexts would be called TVET. Brown and Slater (2018) confirm this trend and argue that many African countries are increasingly integrating vocational and technical content into both lower and upper secondary school curricula, in the belief that this will assist youth in workplaces. From a research perspective, this makes comparative data difficult to obtain, and also means that even quite carefully conducted reviews miss out on studies that don’t name themselves as TVET or VET. In much of this report, we talk specifically about TVET and TVET systems and policies, as these are the policy focus in most countries.

In some countries, higher vocational education is considered part of the university system, and in others, part of the TVET system. The notion of skill varies as well, and Meschi and Vivarelli (2009) argue that this is particularly the case in developing countries.

2.6. Conceptual framing

We use two sets of conceptual framing to consider the data, information, and research into TVET and skills on the continent: theory of change and institutional political economy (or skill formation).

- First, we considered theories of change in evaluations—the nature of evaluations that are being conducted, and what they do and don’t provide insights into. We show that there is a focus on individual outcomes, with little engagement with broader systemic questions—rendering evaluations of limited value.
- Second, we considered what is known about formal TVET systems, from the lens of institutional political economy. This is important because, while painting a descriptive picture is seen as important, we found the available data limited, and subject to frequent change, making such an overview difficult. More importantly, we found that looking only at the formal provision systems is of limited value, because it does not assist in understanding why they look the way they do, how they relate to other forms of provision or where they could be changed in relation to the real economy of the countries in question.

We used these to consider how the issues are understood, and what these different lenses enable us to see.

Theory of change

A theory-based approach focuses on building an understanding of the problem that the policy and/or programme is seeking to address and the assumptions that underpin the programme; that is, the ‘why and the way’ that a programme achieves the results that it does. Theory-based evaluations offer a description of how an intervention is intended to contribute to change (Koleros *et al.*, 2020). The theory of change explicitly stipulates the cause-and-effect sequence through which actions are presumed to produce long-term outcomes or benefits (Donaldson and Lipsey, 2006). Chen and Rossi (1992) confirm the importance of developing an understanding of the causal chain, indicating that this provides information about how change is realized and the mechanisms for change. Pawson and Tilley (1997) reinforce the importance of understanding the mechanisms that contribute to change or what they describe as the mechanisms that establish generative causality between programmes and outcomes. They explain that these mechanisms are usually hidden underneath the observable surface of variables and activities (Astbury and Leeuw, 2010) and offer the configuration of ‘context–mechanism–outcome’ as a way of ensuring that these features are contained in a programme theory.

We use theory of change as a conceptual frame to provide a basis for reviewing the logic underpinning TVET reform and to attempt to surface inconsistencies. This is important in the area of TVET because so much policy, and so much discourse in relation to TVET tends to be circular—TVET is defined as the interface between education and labour markets, and then the focus turns to policy points of alignment rather than whether it is in fact embedding TVET into the labour market (or even enabling those who need the system to play meaningful roles in determining what is needed), when in most cases it is unfortunately not.

The absence of a clear analysis of the theory of change, in many reforms and interventions designed to ‘strengthen’ TVET perhaps explains the disconnect that appears to exist between the problems that TVET is seeking to address, and the visions and aspirations key actors have for TVET.

Part of the reason that the problematic is not well described, or interventions not well formulated, is that TVET and skills interventions are frequently developed in a vacuum outside of the political and economic context in which they exist. We therefore turned to institutional political economy of skill formation.

Institutional political economy of skill formation

This body of research is not well developed outside of OECD countries, with some exceptions, which emphasize that a strong state can play a role in shaping systems (Ashton *et al.*, 1999; Maurer, 2012), but that labour markets, production regimes, and international value chains also play a strong role (Park, 2013; Bogliaccini and Madariaga, 2020; Allais, 2022), and that a sectoral approach may be more useful than a national one (Allais *et al.*, 2021; Sancak, 2022).

Institutional political economy has explored institutional, political, and economic factors that shape skill formation systems. The term ‘skill formation system’ is used to invoke a focus on education systems in so far as they shape and are shaped by labour markets, industrial regimes, production regimes, and so on. Use of this term does not by any means imply that the sole or primary purpose of education is preparation for work. It signals an exploration of

education and training, including workplace-based training⁴, in so far as it shaped by and shapes society and the economy, and what that means for the ways in which skilled workers are produced.

In wealthy countries, this research tradition shows that substantial differences in the size, strength and status, and nature of vocational education systems in wealthy industrialised countries have been shaped by political and economic policies; cultural practices and values; institutional arrangements in the economy; and the roles of different actors in the process of institutionalization (Hall and Soskice, 2001; Thelen, 2004; Busemeyer and Trampusch, 2012b; Bosch, 2017). In these countries, a major focus in this literature is on firms, and specifically, on five key spheres in which, it is argued, in advanced capitalist economies, firms develop relationships (Hall and Soskice, 2001; Thelen, 2004). Researchers have pin-pointed industrial relations; corporate governance; inter-firm relations, employee relations, and vocational and educational training as key variants across skill formation systems in wealthy countries.

Research literature in wealthy countries further shows that the nature of skills which are offered through education systems as well as firm-based training is shaped by the organization of occupations and by socio-economic conditions in the labour process on the one hand, and by the organization of education and training systems on the other (Hall and Soskice, 2001; Iverson and Stephens, 2008). All of these intertwine with broader social policy and macro conditions of possibility such as social welfare spending, labour market regulation, employment protection, and industrial strategies (Hall and Soskice, 2001; Thelen, 2004; Iverson and Stephens, 2008; Busemeyer and Trampusch, 2012a; Martin, 2017; Oliver, Yu and Buchanan, 2019).

In other words, the relationships between vocational education systems and political, economic, and social arrangements are not coincidental, but intrinsic to different types of capitalist economies. These researchers argue that formal vocational education provision systems in wealthy countries tend to look very different from each other because they developed to meet the needs of specific economic sectors, and because they are embedded in specific industrial relations as well as broader social policy.

Even though it has been less applied in low- and middle-income countries, this approach is crucial because it reminds us that education and skill formation are not independent variables which can support systems of industrialisation and development, as opposed to systems which are embedded in systems of industrialisation. Further, that the knowledge, expertise, and skills acquired in a given country is not a simple matter of rational choice by self-optimizing individuals (find the best balance between skills one can afford to obtain and skills which have a long-term payoff), nor a simple matter of choice for policy makers (just improve educational offerings).

We therefore attempt to consider the broader economic, social, and political factors at play that may be shaping how skills are developed and utilized.

⁴ The term is taken to refer to not just to 'practical skills' but all knowledge and abilities acquired through education and training programmes that prepare people to do work and are used in work—although we recognize the contestation around terms and concepts in this area.

3. FINDINGS

This section starts, in 0, with a synthesis of key issues in relation to various aspects of TVET systems, with detailed systematic data about specific institutions, governance and regulatory arrangements, and qualifications provided in *Appendix 03: Overview of systems and policies*. The Appendix provides the most recent available information on most countries, in terms of providing institutions, and is a resource for any initial engagement in each individual country, or plan for research in specific countries, as well as a list of documents and URLs for where more information can be found. The analysis of systems and policies presented in this section also draws on the review of academic research; a full list of all studies consulted can be found in *Appendix 01: Overview of research papers*, and a full list of projects and interventions found across the continent can be found in *Appendix 04: Overview of interventions and projects*. Section 4.3. then provides a high-level overview of evaluations conducted of skills and TVET interventions on the continent. A detailed report containing an overview of all the evaluations examined can be found in *Appendix 02: Overview of evaluative studies*.

3.1. Overview of TVET and skills systems on the continent

The tension between policy and practice

What is clear is an extensive focus on a package of related reforms, encompassing governance reform, qualification reform, and funding reform. A key finding here is that it appears that policy consensus is so ‘established’ so as to be unquestioned, and therefore there is little engagement with whether these policies work or not, as they are seen as the only way of ‘doing TVET’. For example, ‘quality assurance’ systems are widely established or being established, with no evidence about whether, and how, they have actually improved quality. The ‘global toolkit’, sometimes referred to as the ‘governance turn’, is argued by some researchers as leading to ‘policy busyness’, with little effect on real systems (Allais, 2023b).

Our research on the continent (and elsewhere) has highlighted huge disjunctures between policy and implementation, as well as between evidence from research and policy. This is despite, and maybe contributing to, the difficulties faced by many attempts to reform TVET systems. What has remained consistent, despite various reform attempts, as well as projects and other types of interventions, is that systems for formal TVET are persistently small and weak (Oketch, 2007, 2014; King, 2013; McGrath *et al.*, 2019; Allais, 2020).

What is clear is that TVET has for some decades now been seen both as an important priority and is also perceived as being consistently weak in sub-Saharan Africa; the African Union (AU), and many of the regional structures such as SADC, have developed a series of TVET strategies to address this tension, of which the most recent is being finalized at the time of writing. A 2018 strategy stated that ‘VET has to be sold as the magic instrument that converts youth into experts and entrepreneurs’ (African Union, 2018, p. 39). An earlier resolution (adopted in 2014) called on member states to enhance support and investment for

TVET. Many policy documents at a national, regional, and continental level express formal support for TVET and emphasize the need for technical skills in the economy⁵.

At the same time, there is widespread recognition of many weaknesses in TVET systems. In 2007, the AU characterized technical and vocational education in most African nations as inadequate, yet also pointed to recent reforms that showed potential (African Union, 2007). Eleven years later, the AU (2018, p. 8) referred to African TVET systems as ‘under-resourced’ and ‘obsolete,’ with ‘damaged infrastructure’ and ‘inadequate inter-sectoral linkages.’ The 2018 report further noted that ‘In many countries, technical and vocational education is still considered by parents, the public at large and even some politicians as a domain for less academically gifted students’ (p. 13) and highlighted that the ‘poor quality and inefficiency of training has led to a situation where the labour market looks outside the country for skills’ (p. 14). A study on TVET in the Southern African Development Community (SADC) similarly found that although countries emphasize TVET in their official policies and public commitments, the systems still suffer from substantial weaknesses (McGrath *et al.*, 2013).

Aggarwal and Gaskov (2013) argue that policy implementation is often weak, with many policies that are regarded as ‘good’ by policymakers being overly idealistic and based on external models, without enough consideration of local contexts, particularly the risks and challenges associated with execution. Oketch (2014) argues that one of the reasons for the ongoing weakness of formal TVET provision in Africa is that systems tend to have too many aims, many of which are conflicting—curing youth unemployment, supporting innovation and technical change through technological know-how, offering an educational alternative to those who have not succeeded in school, training mid-level skilled workers, and reducing poverty by providing skills leading to employment. Allais and Wedekind (2020) similarly argue that formal TVET will always be challenging in poor countries, and should not be seen as the solution to large-scale educational or social problems, in the absence of major structural economic and labour market reform.

Allais (2022) argues that three interrelated factors *outside* of TVET systems have contributed to the weaknesses of TVET systems. The first is the process, pace, and levels of industrialization. Sub-Saharan African countries have low numbers of well-paying jobs requiring technical expertise, which contributes to the vicious cycle whereby TVET is low status and there is low demand for it. Limited industrialization has an indirect effect, which is the second factor contributing to weak TVET systems: lack of economic development and the maintenance of labour markets with very small numbers of jobs that would be considered ‘middle class’ or ‘mid-level’ in wealthy countries. Most people are in survivalist work that require limited skills, and the few areas for and the areas of informal work that require high levels of skills are limited and require a number of other kinds of support to enable successful small business development. International attention on educational expansion has resulted in expansion although often not improved quality of schooling, which contributes to the weakness of TVET.

⁵ See <http://www.au.int/en/pressreleases/19702/african-union-heads-state-and-government-adopts-continental-education-strategy> (accessed: 20th September 2016)

Few companies have formal relationships with TVET colleges, outside of small-scale interventions, often supported by donors and development agencies, to improve relationships between employers and providers to enhance provision. There is limited data about how much training formal sector firms provide; a World Bank report suggests that it is generally low but varied (Arias, Evans and Santos, 2019). On-the-job training in micro and small firms, often informal, is even more challenging (Franz, Ninan Dulvy and Marock, 2022).

We found, when reviewing evaluations, that as would be expected one of the most consistent aims of projects seeking to strengthen TVET was enhancing employability by equipping project participants with relevant skills. Some examples include training in vocational and technical skills, business and entrepreneurial skills, digital skills, and through facilitating apprenticeships. Around a quarter of projects also aimed to strengthen TVET and skills training systems. Examples include aiming to improve the quality, accessibility and relevance of TVET institutions, or focusing on developing curricula aligned with industry needs. Quite a few projects also focus on supporting youth entrepreneurship through business training, mentorship and access to finance. There is also a theme in several of the project objectives that emphasizes gender equality and other inclusion issues such as improving access to skills training and employment for marginalized or vulnerable groups.

Governments, donors and development agencies are the main actors in this space. There is some indication of private sector activity in some countries. Much of the work of governments as well as donor and development agencies are focused on attempting to draw the private sector in or increase their engagement. Among the most prominent agencies involved in TVET projects across Sub-Saharan Africa (SSA) are the World Bank, GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), AfDB (African Development Bank), and the EU (European Union). Others include AUDA-NEPAD, UNDP, ILO, USAID, and UNESCO-UNEVOC.

These organizations have been instrumental in driving forward various initiatives aimed at improving technical and vocational education and training systems throughout the region:

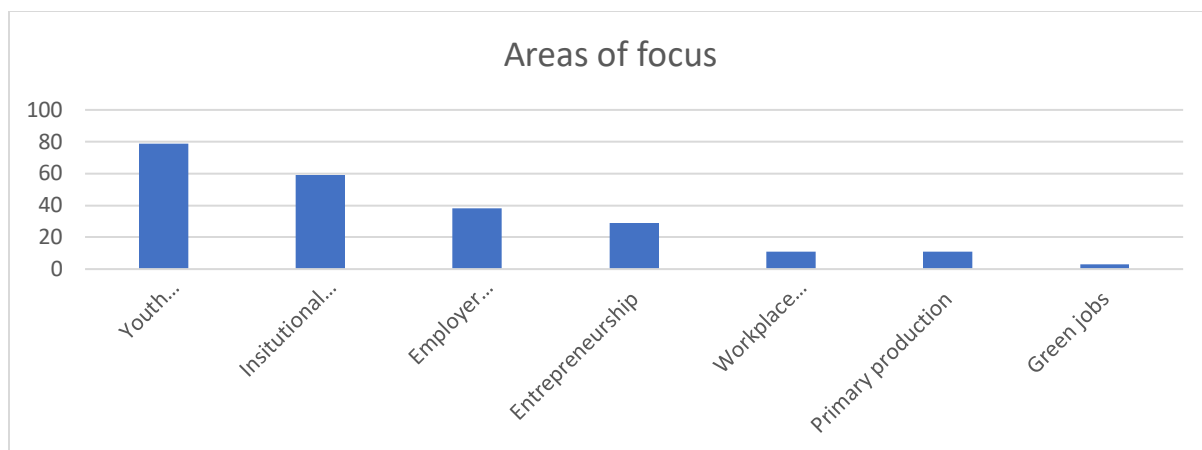
- **World Bank:** Focuses on a comprehensive skillset (cognitive, socio-emotional, specialized, digital) and addresses key issues like access, adaptability, quality, relevance, and efficiency. Their approach has evolved over time, with increasing emphasis on public sector involvement and a shift from a narrow focus on TVET to broader skills development. They also highlight the importance of balancing productivity and inclusivity.
- **GIZ:** Emphasizes a "practice-oriented" TVET based on the German dual model (classroom and industry training). They work with governments and the private sector, focusing on dialogue, labour market responsiveness, training for TVET personnel, standards development, and research.
- **AfDB:** Highlights the disconnect between TVET and industry, citing unclear goals, weak governance, inadequate funding, and limited apprenticeships. They recommend developing a credible reform agenda, strengthening stakeholder engagement, and improving governance and financing.

- **AU:** Has a continental strategy for TVET, aiming to address youth unemployment through relevant skills development. They call for a paradigm shift in TVET, focusing on innovation, industry links, improved governance, and increased funding.
- **EU:** Supports TVET in Sub-Saharan Africa through projects like ARCHIPELAGO, which aims to build ‘opportunity-driven’ VET, matching labour supply with demand, strengthening entrepreneurial skills, and developing TVET resources adapted to private sector needs. They have large portfolios that go to bilateral or multilateral implementers
- **UNESCO-UNEVOC:** Focuses on international cooperation and knowledge sharing in TVET, providing resources and country profiles to support member states in developing their TVET systems.

Many development agencies and international organizations argue that TVET and skills development plays a critical role in addressing youth unemployment, promoting economic growth, and achieving sustainable development in Africa. While challenges remain, there is a growing recognition of the need for systemic change, stronger industry engagement, and a focus on quality and relevance in TVET programs. Common strategic focuses include:

Improving the quality and relevance of TVET programs	Through aligning TVET curricula with labour market demands, strengthening teacher training, and promoting the use of technology in education
Increasing access to quality TVET	Through expanding access to TVET programs, especially for marginalized groups such as women and people with disabilities, and reducing the cost of TVET
Strengthening TVET governance and financing	Through improving the management of TVET institutions, increasing public and private sector investment in TVET, and promoting innovative financing mechanisms
Promoting regional cooperation in TVET	Through fostering collaboration among countries in Sub-Saharan Africa to develop common standards, share best practices, and promote the mobility of skilled workers

Recent and ongoing programmes by donor agencies often target critical issues such as youth unemployment, workplace transformation, employer engagement, entrepreneurship, institutional capacity, primary production, and green jobs. Youth unemployment was a major focus across nearly 80 projects related to TVET and skills development.



It is interesting to observe that youth unemployment – most often addressed through some form of training intervention – was one of the top themes for projects carried out by donor agencies within the review period. In many cases, to bypass the question of employment, many agencies are now focusing on the question of whether TVET can lead to the creation of entrepreneurs, who do not necessarily need a job to become an active participant in their country's economy. Another area of focus for donors and development agencies has been on institutional capacity building. This relates both to the government institutions making up the bureaucratic functions supporting TVET as well as, to a lesser extent, the TVET institutions themselves. Many organizations suggest that building capacity at different institutional levels will enable those countries to strengthen their TVET systems. Increasing relevance of TVET to the market is a common theme in the donor agency discourse; it is therefore not surprising to see employer engagement among the top themes addressed by donor agency projects. Yet, examples of highly successful system-wide reforms are hard to find, although successful programmes can be found on a small scale.

There are some examples of positive impacts of short-term training programmes aimed at supporting self-employment and small-scale entrepreneurship, with more successes found in those that include grant support (Ngatia and Rigolini, 2019). They note that in general there is little evaluation of such programmes, but discuss programmes with some success in Kenya, South Africa, Togo, and Uganda. The Mastercard Foundation (2020) argues that the Educate! Programmes in Rwanda and Uganda provide a model of entrepreneurship education in secondary schooling, but do not give data on labour market outcomes. Business-start up training also has mixed but in general modest results (Ngatia and Rigolini, 2019). Similarly, a meta-analysis of youth employment programmes (Kluve *et al.*, 2017) found positive but relatively small outcomes. They argue that comprehensive programmes that include substantial training as well as work experience and support in accessing labour markets are more successful; a metareview in South Africa had similar findings (Altman and Marock, 2008). Cramer, Sender, and Oqubay (2020, p. 182) conclude that:

Diverting resources away from enhancing numeracy and literacy in schools to create entrepreneurial skills is a policy that has also failed to achieve employment or other economic benefits. A review of entrepreneurship training that focuses on evaluations in low- and middle-income economies—including some sub-Saharan African economies—argues that most interventions targeting micro-enterprises with up to five employees or aiming to enhance youth self-employment *cannot* be shown to have significant positive effects on employment, sales revenue, or profits.

Finding alternatives that actually work with existing economies and existing institutional realities seems to be an urgent research priority. In particular, what seems important is finding models of provision that make sense in specific contexts, and developing insight into how to build them.

Below we present an analysis of the history of reforms and policy changes, and what has underpinned success or failure. We looked for information on policies in place; linkages across policies; incentives to encourage training and skills development; analysis of how policy works in practice; and what the current policy preoccupations appear to be.

High level insights into systems and policy priorities

Provision systems and enrolment

According to Unesco,⁶ in general TVET in sub-Saharan African countries starts from year 9 or 10. The duration of formal TVET programmes tends to be between three and six years. Many countries have TVET offerings parallel to both junior and senior secondary school, but some only parallel to senior secondary school. TVET may be integrated into compulsory schooling, or offered through elective subjects as part of schooling (eg Namibia, Nigeria), or, there may be separate institutions offering technical and vocational programmes at a senior secondary level (Kenya, South Africa). Most systems are multi-layered—they have secondary vocational in schools, colleges or similar, and undergraduate colleges and universities. Tertiary TVET, however, is a recent development, and articulation with universities differs across countries, with very limited possibilities for it in many.

Because of different terms and different understandings of TVET enrolments, international sources like UIS give a very incomplete picture of enrollment and completion data—it is not clear whether like is compared with like (UNESCO Institute for Statistics, 2025). Further, UIS data generally reflects formal TVET located under ministries of education, but in many countries, there is also training organized under other ministries, often not well integrated into formal TVET provision.

The size of private for- and not-for-profit systems varies considerably and it is difficult to disaggregate from other higher education data in most cases (McGrath *et al.*, 2019).

Notwithstanding these differences, what is clear is that most countries on the sub-Saharan continent have formal TVET systems that are very small relative to general schooling and even university enrollments. According to some studies, formal TVET enrolls between 1% and 6% of the young people in education (ICQN/TVSD, 2014); Santos, Alonso Soto, and Sosale (2019) cite an average of 12.2% of students in upper-secondary education in sub-Saharan Africa being enrolled in vocational programmes in 2014, from 13.4% in 2010. In lower-secondary education, where in the main there is less specialization in formal education, they report that the share increased from 2.7% in 2010 to 3.1% in 2014. However, they point out that these averages hide significant differences across countries, and that countries like Angola and Cameroon have relatively large enrolments while in Kenya or Mauritania they are tiny (Kenya may have changed since then). It is not clear, however, whether like and like are being compared.

⁶ <https://unevoc.unesco.org/go.php?q=World+TVET+Database> accessed 28th October 2019

Early specialization is a controversial issue. Santos, Alonso Soto, and Sosale (2019) describe the incorporation of basic vocational skills into the primary and lower secondary school curriculum in Burkina Faso, Liberia, and Mozambique; and Oketch (2007) discusses (and unsuccessful) attempts at early vocationalization in Ghana and Kenya⁷, arguing for longer periods of general education and shorter, more specialized technical training. Cramer, Sender, and Oqubay (2020, p. 182) agree, arguing:

If education is a cumulative process, with later learning building on earlier learning, it follows that an improvement in the levels of literacy and numeracy achieved in African secondary schools could make in-employment training much more effective; and these improvements would probably have a more positive impact on labour productivity than expenditures to improve ‘skills’.

Arias, Evans, and Santos (2019) argue that early specialization reinforces the weaknesses of TVET systems, because it takes place at the expense of building foundational skills, and then reinforces the vicious circle of low status TVET.

In general, TVET enrolments are highly gendered, and these differences matter for future earnings. Santos, Alonso Soto, and Sosale (2019) cite an example from Uganda (Campos *et al.*, 2015) showing that women who enter male dominated sectors make as much as men, and three times more than women who stay in female-dominated sectors.

TVET is mainly offered through education-institution based provision, as opposed to workplace-based (apprenticeship) provision. Arias, Evans, and Santos (2019) suggest that many countries on the continent are trying to build or expand apprenticeships and internships for university graduates. However, apprenticeship systems are generally small and weak. There are project-based examples of incentive schemes that attempt to encourage employers to take on interns or apprentices, as well as attempts at partnerships with employers (Arias, Evans and Santos, 2019). Franz (2017) suggests that there is anecdotal evidence about good employment outcomes for apprentices in some countries, but cautions that this could be related to selection biases of apprentices and the fact that formal apprenticeship places are mainly offered by those companies that train for own recruitment purposes.

Many countries, particularly in West Africa, have large informal apprenticeship systems (Walther and Filipiak, 2007; Palmer, 2009; ILO, 2012; Adams, Johansson and Razmara, 2013). Walther and Filipiak (2007) conclude, from a survey of seven countries, that on-the-job training, self-training, and informal apprenticeships constitute the vast majority of TVET provision. There have also been many initiatives to strengthen and/or formalize *informal* apprenticeships since the 1980s, including such measures as introducing elements of classroom training; the training of workplace trainers (mastercraftsmen); measures to improve working conditions; and attempts to bring informal apprenticeships into certification systems (ILO, 2012; Ngatia and Rigolini, 2019). Ngatia and Rigolini argue that there has been little formal evaluation of such attempts, and in many cases, they have been very small scale, with initial small interventions that never get scaled up.

⁷ These recent reports echo the earlier work by Foster (1965) on the ‘vocational fallacy’.

As discussed below under governance, the fact that many different ministries are often involved in different types of skills provision leads to fragmented systems of provision. For example, agricultural extension programmes are seen as important in many countries. They usually fall under agriculture ministries and have no or very weak linkages with education provision systems. Ngatia and Rigolini (2019) argue that these programmes are small and limited, and in the main have not lived up to expectations, sometimes because technological adoption to improve productivity is low, and many farmers have no access to improved technology let alone knowledge of how to use it. They seldom address gaps in foundational skills—literacy and numeracy—which are important for adoption of new technology.

Active labour market programmes and policies are discussed in the section on labour market relevance below. However, what is worth pointing out here is that active labour market programmes may contribute to the fragmented and disjointed nature of interventions and provision, formal and informal. A review of evaluations of these programmes in South Africa highlights that a problem in terms of addressing the youth unemployment challenge is the plethora of agencies across national and provincial governments that are not well-coordinated, that have struggled to implement programmes efficiently, and that are not accountable in the strong sense (World Bank, 2021). This includes the youth-specific ‘desks’ at various levels of governance, but also the national departments of basic and higher education, for instance; poor educational outcomes, particularly in basic numeracy and literacy, which are critical basic skills for employers; a poorly coordinated further education system, which allows many young people to drop out and become vulnerable.

There is significant non-formal provision of various types of vocational skills development delivered by public, private, or nongovernmental organizations, as well as various types of active labour market policies and programmes, many of which include skills interventions (Adams, Johansson and Razmara, 2013). Ngatia and Rigolini (2019) describe a wide range of ‘remedial’ training programs supporting livelihoods and small-scale entrepreneurship, including public works with a training component supporting entrepreneurship in West Africa, comprehensive programs with a significant training and coaching component aimed at improving the productivity of the rural poor, and programs promoting small-scale entrepreneurship and improvements in the productivity of existing small-scale entrepreneurs. Some industries have training workshops, and some large companies run their own TVET centres, leading to internationally recognized certificates (Franz, 2017). There is also little evidence available about the extent to which efforts are being made to integrate digital learning into the provision system and/or develop digital skills, as well as the extent to which programmes are being adapted to meet changing needs of the economy in terms of shifting away from carbon, this was not evident beyond some statements of policy aspiration.

The quality of teacher training is seen as a problem in many countries, as well as outdated facilities (Billetoft, 2016; Santos, Alonso Soto and Sosale, 2019). Teacher education is sometimes university-based—and very similar if not identical to schoolteacher training, or, in some cases teachers are skilled workers with limited or no training as teachers. Exceptions are found in Tanzania, with a dedicated Vocational Teachers Training College, and Cameroon, with the Normal Schools for Teachers of Technical Education (Arias, Evans and Santos, 2019, p. 11). Kenya and Ghana have recently opened similar institutions. Arias, Evans, and Santos (2019) argue that relatively few teachers in public TVET institutions have industry experience, in part because of the requirements for teaching qualifications.

Governance arrangements and systems

The various overviews of TVET systems show many changes—sometimes from ministry to ministry but also the creation of regulatory authorities, and qualifications authorities, and changing jurisdiction and roles of various institutions. In many countries, what can be seen is shifts from ministries of education to ministries of labour and back. At the time of writing, it seems that more countries currently have TVET located under ministries of labour. Burundi, Cote d'Ivoire, Burkina Faso, and Benin have Ministries specifically for TVET. Sierra Leone and South Africa have Ministries that include higher and technical education. In Mali, there is still a distinction between technical education (with Ministry of Education) and vocational training (with Ministry of Labour). Chad has a Ministry of Vocational Training and Micro Commerce.

Many countries, including Botswana, Kenya, Ghana, Ethiopia, Malawi, Mauritius, South Africa, and Tanzania, have established coordinating bodies and autonomous agencies for oversight, legislation and agreements to ensure coordination, although their effectiveness is not well researched. Santos, Alonso Soto, and Sosale (2019) argue that semiautonomous national TVET governing bodies tend to lack adequate involvement of key stakeholders such as private businesses and nonstate TVET providers. Similarly, Arias, Evans, and Santos (2019) argue that while over the past decade many countries in sub-Saharan Africa have set up agencies to conduct quality assurance assessments and accreditation, the capacity of such agencies is limited.

In most countries, aspects of skills and active labour market policies also sit under other ministries, some with very many. For example, in Cameroon, there are four main ministries involved in TVET provision: the Ministry of Basic Education, Ministry of Secondary Education, Ministry of Higher Education and Ministry of Employment and Vocational Training (Castel-Branco, 2020). But in addition, the Ministry of Youth and Civic Education oversees issues related to out-of-school youth. Other ministries have a role in skills development, such as the Ministry of Livestock, Fisheries and Animal Industries. Finally, the Ministry of Economy, Planning and Regional Development coordinates the strategic planning of the education and training sector as a whole. Similarly, in Chad, at least seven ministries play some role in the vocational education and training sector; in Egypt it is over 15. The three main ministries are the Ministry of Vocational Training and Micro Commerce (Ministère de la Formation Professionnelle et des Petits Métiers , MFPPM); the Ministry of National Education and Civics Promotion (Ministère de l'Education Nationale et de la Promotion Civique, MENPC); and the Ministry of Higher Education, Research and Innovation (Ministère de l'Enseignement Supérieur, de la Recherche et de l'Innovation, MESRI). Each of these ministries manages training centres or schools which deliver diplomas or certificates. However, many other ministries also manage training schools and centres in their specific sector, without any relationship to the three major ministries. For example: the Ministry of Civil Service, Labor, and Social Dialogue manages eight training centres; the Ministry of Agriculture has 35 centres; and the Ministries of Health, Justice, Livestock, Post and Telecommunications, and Youth all manage technical and vocational centres.

Santos, Alonso Soto, and Sosale (2019) suggest that the implementation of TVET strategies is made difficult by poor coordination and weak clarity of functions across different actors in the system. Arias, Evans, and Santos (2019, p. 1) make a similar point, arguing that 'Multiple

agencies at the central and local levels are involved in skills development strategies, making skills “everyone’s problem, but no one’s responsibility.” Lack of coordination across these many different structures is seen as a problem in many countries—often resulting in the creation of new coordinating structures. In some countries national TVET structures, sometimes in Ministries and sometimes semi-autonomous or state corporations, have been created to govern and oversee TVET, and coordinate across role players. In some cases, they also accredit providers, mainly only private although sometimes (eg Kenya) also public providers. But what appears to happen is that these institutions simply become another player, as opposed to being a body that brings all existing players together. We could not ascertain if this was different where these bodies play an accreditation role for private providers. In Kenya, the public authority also accredits public providers.

Reforms to governance arrangements, including the creation of new structures, generally state that they are aimed at improving efficiency (through coordination) and responsiveness to the needs of industry and the private sector. What was confirmed in the analysis of country profiles and other available reports was high level structures in many countries for social partner dialogue. For example, Botswana and South Africa have had a National Human Resource Development Council for some years, and South Africa has a number of other structures as well. One interviewee said, we have done ‘summit after summit’. The same interviewee was hopeful about a shift to sectoral engagement, and research does suggest many ways in which this has a higher likelihood of success. In some countries, sector skills bodies are being developed (ILO, 2021), and, in the best cases, this is being done flexibly, with different approaches depending on the needs and dynamics of different sectors. But there is little evidence of these structures really succeeding in their stated goals to-date.

What is striking is the absence of analysis of the ways in which and extent to which improvements were achieved, or indeed much research into the effects that they have had, with the exception of South Africa where there is some research (Allais, 2007a, 2025). What is frequently found in available documentation is mention of problems with structures (struggling to get off the ground, meeting too infrequently, and so on).

Mcgrath (2012) and Allais (2007a, 2014, 2023b, 2025) describe shifting regulatory and funding models as a manifestation of the global shift to new public management style public sector reform, using market-based regulatory systems (funding in specific is discussed in more detail below). New Public Management broadly refers to an approach to public sector reform through forcing state institutions to operate ‘as if’ they were in a market, or to compete in markets, through a greater element on results or outcomes (Hood 1995; Pollit 1998). While described as decreasing the role of the state, as it no longer directly provides services, in many instances it has resulted in an increased state, but a state that regulates instead of providing services—because the contractualization must be managed (Hudson 2010). The shift to contractualization and ‘as if’ markets has co-existed with more conventional bureaucracy and funding models.

Mcgrath (2012) talks about a ‘global toolkit’ of reforms, which includes the kinds of changes made to governance structures, looking at how prevalent they have become. The changes introduced through this ‘global toolkit’ are frequently concerned with governance reform, linked to qualification reform as further discussed below, as well as attempts to create so-called ‘demand-led training’. Originating in reforms to vocational education in the United

Kingdom (UK) and Australia, as discussed by Wheelahan and Moodie (2024), this toolkit has been particularly dominant in the reform of vocational education in low- and middle-income countries. As was the case in the original UK context, policy makers and development agencies look to vocational education to solve labour market crises across low- and middle-income countries. The ‘toolkit’ claims to enable demand-led, responsive, flexible provision.

In the vocational education space, this is linked to pseudo-employer-led reforms and accreditation mechanisms, because, as McGrath and Allais show, they are driven by the idea that vocational education should meet the immediate training needs of employers. The ‘global toolkit’ includes giving more power to employers through so-called competence-based qualifications and qualifications frameworks; quality assurance and regulatory systems; outcomes-based and ‘institutionally-neutral’ funding; and managed autonomy for public providers. These reforms manifest differently across the continent, and appear slightly more prevalent in English-speaking African countries.

Competency-based qualifications and qualifications frameworks

Qualification reform, particularly through the mechanism of employer-specified competency-statements or occupational standards, is part of this ‘global toolkit’, and can be observed in many African countries, sometimes linked to the introduction of sectoral bodies.

In relation to competency-based training and occupational standards, the idea is that industry representatives or employers should specify ‘competences’ or ‘learning outcomes’, which education institutions, re-envisioned as responsive ‘providers’ competing in a market, then use to design their curricula (Wheelahan and Moodie, 2024; Allais, 2025).

A 2020 evaluation of competence-based training in seven African countries found widespread support for the approach, although difficulties with implementation (UNESCO, IIEP and IFEF, 2020). The evaluation argues that most francophone African countries have reformed their TVET systems using a competence-based training model, with an extensive role for donors and international organizations; a strong role for these organizations is also noted in anglophone countries that have adopted this model. The country described by the evaluation as the most advanced is Ethiopia, where competence-based training was introduced from the start of the 2000s, and intensively implemented from 2005-2006 onwards. The Unesco, IIEP and IFEF evaluation describes the biggest achievements as establishing a strong public-private partnership and the development of 675 occupational standards. Rwanda is also described as successful at implementing competence-based training across their TVET system, although only starting in 2015, and focused to-date on understanding employment needs and developing occupational standards. Senegal is described as experimenting for many years, officially adopting the approach in 2015, but only starting to implement it very recently. Ghana, according to the evaluation, has established public-private partnerships to develop occupational standards, but so far only has involved a small number of TVET institutions and mainly lower level qualifications. Benin has piloted a competence-based training approach in the craft sector, focused on informal or traditional apprenticeships. In Morocco, according to the evaluation, competence-based training has been implemented across the TVET system. Finally, in South Africa, the evaluation argues that only two types of training have used competence-based training. This is somewhat misleading, given that the reform of qualifications introduced in 1995 in South Africa attempted and failed to use this approach to the whole system (Allais, 2007b, 2011; Gamble, 2020).

The evaluation (UNESCO, IIEP and IFEF, 2020) found, in common with much research literature in this area, that with a few rare exceptions such as in the upgrading of the traditional apprenticeship in Benin, private sector presence was limited. While partnerships with employers are seen as one of the key benefits of competence-based training, the study found little involvement, with a few exceptions, mainly involved in engineering and in taking in trainees or trainers for upgrading. It also points to a gap between legislation and policy and actual implementation. The evaluation did not extend to investigating actual changes to pedagogy, curricula, and assessment, nor to an analysis of whether the implementation of competence-based training had actually improved the fit between education programmes and workplaces.

SADC countries are currently involved in strengthening occupational standards, with support of the AU and GiZ. In the main, this seems to be an initiative coming from TVET actors, who are attempting to involve employers. The standards are not used in workplaces, currently, other than as training standards (where they are used at all).

Competence-based reforms of secondary school curricula are also evident in many countries (Mastercard Foundation, 2020). While a new wave of competence-based reforms is currently in evidence, many countries all over the continent have engaged in similar reforms for ten or twenty years already (African Union, 2020a). Evaluation of the extent to which they have improved relations with employers, employment of graduates, or even changed pedagogy, curriculum, and assessment is lacking (Fleisch, Gultig and Allais, 2019).

Linked to competence-based training initiatives is the introduction of qualifications frameworks, for TVET or for entire education and training systems. They are seen as tools to standardize education and training, link across countries, and create better linkages across different parts of education and training systems within countries. The European Union (EU) as well as the ILO have been active in this area of policy making, as well as other international organizations. The EU is currently supporting the African Union to develop a continent-wide framework (African Union, 2020a).

Attempts to harmonize qualifications are not new on the continent—they can be seen since the early 80s. Africa has had a continent-wide agreement about the recognition of qualifications—the Arusha convention—since 1981. It was initially focused on higher education qualifications and was widely seen as not having been implemented. This convention was revised in Addis Ababa on 12th December 2014, and is therefore now referred to as the Addis Convention (in full, the Revised Convention on the Recognition of Studies, Certificates, Diplomas, Degrees and Other Academic Qualifications on Higher Education in African States). Other related policies are a Pan-African Quality Assurance and Accreditation Framework and the African Standards and Guidelines for Quality Assurance. The latter offers guidelines recommending that learning outcomes be defined and documented for all programmes and benchmarked against level descriptors of national or regional qualifications frameworks. In 2019 eight African national quality agencies participated in pilot external evaluations testing the ASG-QA, but no publicly available analysis could be found.

In terms of regional frameworks, Southern Africa is described as having the most advanced regional framework, approved since 2011, and ‘reactivated’ in 2017 (African Union, 2020a). This followed a protocol on education and training in 1997, and through this established a

technical committee to attempt to relate ('harmonize') qualifications across national borders in the region. The work of this committee was influenced by the emerging qualifications frameworks in South Africa, Namibia, and Mauritius, and by March 2005 a SADC concept document for ensuring comparability of qualifications and credits across borders in the SADC region was adopted (Keevy, 2011). The intention is for all countries of the Southern African Development Community (SADC) to align their qualification frameworks or systems to the regional framework. A tool for self-assessment has been disseminated, with support from the European Training Foundation. Peer learning and capacity building workshops have been undertaken to assist the countries with the process. Eight countries (Botswana, Eswatini, Lesotho, Mauritius, Namibia, Seychelles, South Africa and Zambia) agreed to be part of a pilot phase of alignment in 2017, and Angola, Democratic Republic of Congo and Zimbabwe joined in 2019. According to the AU report, two member states—Seychelles and South Africa—had completed this exercise by 2020. What it has actually achieved since then is not clear. A 2022 report (SADC secretariat, 2022) suggests that the development of the National Qualification Frameworks, the creation of TVET national bodies with oversight functions for training, certification, quality assurance and other functions is key to current TVET reform. However, there is no published peer-reviewed research in the region, outside of South Africa and a 2011 paper on the Botswana framework (Tau and Modesto, 2011).

In the Economic Community of West African States (Ecowas) region, guidelines for regional and national qualifications frameworks were approved by ministers of education approved in October 2013 (African Union, 2020a). The AU report suggests that Nigeria, the Gambia, Ghana, Cape Verde, and Senegal have functional national frameworks, and the report further argues that a common approach will be adopted for the development of qualifications in the region, to support harmonisation across countries. Policies such as the Framework for Recognition and Equivalence of Certificates in the Ecowas Region and the Ecowas Benchmarks for the Harmonisation of University Education are being developed. Ibouk (2020) points out that many tools and systems for qualification and skill recognition exist in the region.

East Africa has recently developed a regional framework for TVET qualifications⁸. The region has a regional framework for higher education qualifications, which was adopted in 2015, but little information is available about how it is actually being used. The overall coordination for the higher education section of the framework rests with the Inter-University Council for East Africa (African Union, 2020a).

On all of these frameworks and initiatives, little information is available on what is actually happening, and whether the policies, guidelines, and frameworks are achieving their goals—but what is striking is the repeated introduction of policies to achieve similar goals. The AU study argues that there are many weaknesses of regional bodies, and that it is not clear whether they have the capacity to develop and implement regional qualifications; certainly, progress has been slow to date, according to the report (African Union, 2020a). Nonetheless, the report argues for the necessity of an African Continental Qualifications Framework by 2022, with the aim of contributing to enhanced comparability, quality and transparency of

⁸ <https://www.eastrip.iucea.org/regional-tvet-qualifications-framework> accessed 19th August 2025

qualifications of all levels and from all sub-systems and facilitating recognition credentials and therefore mobility of learners and workers. What is striking is the little evidence provided either that qualifications are currently a primary barrier to mobility, or that qualifications frameworks have improved mobility, and one study arguing that they have not (Marock and Allais, 2022).

In terms of national frameworks, the 2020 AU report (African Union, 2020a) provides an overview of the development of qualifications frameworks: out of the 40 countries examined, 17 had approved national qualifications frameworks; 10 were engaged in consultation and initial development of design and policies; 10 had started planning the development of qualifications frameworks; and three had started the first steps of reflection and analysis towards NQF. Our data gathering did not find substantial change four years on. Where frameworks are in place, they are mainly described using this type of language:

The Gambia Skills Qualification Framework (GSQF) was introduced in 2006 to provide a coherent system of quality assurance standards, levels, qualifications and processes in TVET. The GSQF is administered by the National Accreditation and Quality Assurance Authority (NAQAA) and is designed to meet the skills requirements of all economic sectors, to provide standards for both initial and continuous vocational training and to include learners with low literacy levels. Its key features are: (a) an orientation towards learning outcomes rather than input-developed syllabi; (b) an orientation toward occupational competencies based on knowledge and ability to perform certain tasks; (c) a preference for assessments that are benchmarked against those competencies, rather than for exams; and (d) a consideration of international best practices. The GSQF defines skills standards for five qualification levels: from a foundation level for nonformal learners (which requires only basic skills in English and numeracy) to an advanced qualification level (which requires management, analytical and professional skills). It covers TVET and basic skills, not including higher education⁹.

We did find that most countries currently have more explicitly described maps of qualifications than was previously the case, and these do show the relationship of national TVET qualifications to school and university qualifications—details can be found in *Appendix 03: Overview of systems and policies*.

There is very little published peer-reviewed research about national or regional qualifications frameworks in Africa, outside of South Africa where there is considerable research (Samson and Vally, 1996; Breier, 1998; Allais, 2003, 2007b, 2007a, 2011; Granville, 2004; Muller, 2004; French, 2005; Keevy, 2006; Lugg, 2007; Heitmann and Mummenthey, 2009). There is some research in Botswana, Ethiopia, Mauritius, Namibia, and Tunisia (Marock, 2011; Tau and Modesto, 2011; Thorsen, 2014; Allais, 2017). Arias, Evans, and Santos (2019) argue that complex qualifications frameworks tend to overstretch administrative capacity, especially for TVET, and that it is important to avoid overinvesting in complex NQFs and certification systems. There is evidence, especially in South Africa, that outcomes-based qualifications framework has introduced an enormous amount of policy complexity, and a raft of new institutions in a context in which most institutions were weak. Even outside of Africa, where

⁹ https://naqaa.gm/wp-content/uploads/2021/03/FINAL_DRAFT_GNQF_DOCUMENT.pdf accessed 22nd April 2025

there is a stronger body of research, the evidence that qualifications frameworks have been successfully implemented, let alone that they have achieved the many goals policy makers have associated with them, is very limited; the research literature is mainly critical or very cautious (Bouder, 2003; Raffe, 2003, 2011, 2013; Young, 2005; Bohlinger, 2007, 2012; Allais, 2010, 2014, 2017, 2019; Brown, 2011; Lester, 2011; Lassnigg, 2012; Méhaut and Winch, 2012; Hupfer and Spöttl, 2014; Gössling, 2015; Pilcher, Fernie and Smith, 2015).

The majority of qualifications frameworks that seem to be to some extent operational were found in southern Africa. In the north, Egypt, Morocco, and Tunisia have had legally established frameworks for some time and are working on implementation structures and registers of qualifications. In west Africa the situation seems to be more diverse. Of course, like all countries, all African countries have qualifications systems, including systems for developing qualifications, for cataloguing qualifications, and for relating qualifications to each other. So, for example, west African countries have established systems such as the Licence Master Doctorat (LMD) system in higher education; this system is also found in central African countries such as Cameroon. This is an element of the higher education harmonization for the Francophone countries of West and Central Africa within their Council for Higher Education (CAMES). The move towards organizing them all into single national frameworks, and specifically the trend of doing this using learning outcomes or competencies, and attempts to engage employers in this process, has emerged in the last 20 years. Ghana has an eight-level TVET framework and is engaging in the development of a comprehensive NQF. Cape Verde has a comprehensive national qualifications framework that has been in design and implementation for over ten years. Other west African countries, such as Sierra Leone and Guinea-Bissau, were found to be at early stages of their NQF development processes.

In east Africa, the Ethiopian qualifications framework has been in development since 2006 and was formally proclaimed in 2010, but it is unclear whether legislation has been enacted since the proclamation. In Kenya regulations for a qualifications framework have been developed and gazetted the Kenya National Qualifications Authority, and this body is in the process of developing occupational and training standards, with the hope that this will align qualifications to industry and employer needs. Rwanda adopted a qualifications framework for higher education in 2007, and is currently developing and implementing a single national qualifications framework. However, there is no published evidence on how this has proceeded to date.

Another reason for the focus on qualifications is, ostensibly, to support labour mobility—although this educational imperative often conflicts with actual migration systems and policies (Marock and Allais, 2022). Further, there is little conclusive evidence demonstrating that lack of recognition of qualifications is the problem here, nor that it is a major barrier to labour mobility. It seems to be more of a concern at for workers with higher levels of skills (Marock and Allais, 2022) although in such cases institutional reputations in many cases seem to suffice (Ibourk, 2020).

Funding

Four main points stand out here. First, TVET systems remain under-funded. Second, skills levies have been introduced to remedy this, although with little formal monitoring and evaluation, and apparent variation in effects. Third, funding reform has been linked to qualification-reform and governance reform in many countries, as per the ‘global toolkit’

described above. Fourth, it is very difficult to get detailed information on funding. We discuss each of these briefly below.

In relation to the first point, TVET systems are widely seen as very underfunded in sub-Saharan Africa (Santos, Alonso Soto and Sosale, 2019), confirmed by recent reports and policies at continental and sub-regional levels (African Union, 2018, 2024; SADC secretariat, 2022). Ngatia and Rigolini (2019) argue that inadequate funding is partly the result of inadequate institutional arrangements because productive partnerships with the private sector are lacking. All of this means that teacher training, facilities, equipment, and curricula development are in general underfinanced.

This is linked to the second point, skills levies (Johanson, 2009; Walther and Uhder, 2014; Ngatia and Rigolini, 2019; Palmer, 2020), that have been used to increase available funds. For example, more than 80 percent of TVET provision in Tanzania is financed through a payroll levy (Ngatia and Rigolini, 2019). In some cases, levies are managed by independent or semi-independent structures with stakeholder representation, not always with great effectiveness (Allais and Ngcwangu, 2025). A recent report by the World Bank, UNESCO, and the ILO suggests that (2023) because reports of these funds are often linked to training outputs, impact on employment outcomes, workers' employability, or firms' productivity is limited.

A recent assessment of training levies in the SADC region, where such mechanisms have been in place for over a decade in some countries, indicates that they have been largely ineffective in stimulating training incentives, with limited evidence supporting impact on employment outcomes (Palmer, 2020). The review found that the monitoring and evaluation frameworks for these training funds are often weak and underdeveloped. Although there were some instances in certain sectors where the levies appeared to yield positive outcomes, the overall findings suggest that both employers and employees are not deriving significant benefits from the system. This is partly attributed to the fact that, in several countries, employers have limited influence over the administration of the levies, due to their marginal role in the governance structures that oversee them. The study contends that, in many cases, these systems are poorly conceptualized, inefficiently managed, inadequately governed, and insufficiently monitored or evaluated. Furthermore, the levies are frequently perceived as an additional financial burden, rather than a tool for workforce development. In many instances, surpluses have been accumulated, suggesting that the problem lies not only in the lack of financial resources for TVET systems, but also in the limited capacity to effectively allocate and utilize the available funds.

In relation to the third point, the mechanisms of competency-based training and the 'global toolkit' can be understood as part of the idea of new public management (Hood, 1995) and the notion of 'quasi-markets' or of government functioning as if its service provision happened through markets (Crouch, 2011). Bringing this into focus is helpful in looking at how the global toolkit is introduced in many African countries that still have publicly funded vocational education. It is also important to consider the effects of this in the African context, where international organizations have emphasized the idea of rent-seeking states and used debt relief to force through privatization (Mkandawire, 2005, 2015). There is little evidence in the African vocational education space that it has led to the responsive, nimble providers invoked in the idea of new public management (Hudson, 2010; Jakobi, Martens and Wolf, 2010).

In relation to the fourth point, we attempted to get information on overall levels of spending (on TVET and skills); what the funding mechanisms are (what is funded by the state and whether or not employers play a role); whether or not there a levy on employers; whether or not funding is against enrolments or learning programmes; and how much TVET is funded through donors.

Even though the systematic reforms are taking place in the TVET sector, the financial and capital investments in TVET are inadequate to allow for effective implementation of such reforms. (SADC secretariat, 2022)

Labour market relevance and industry engagement

Santos, Alonso Soto, and Sosale (2019) argue that in many African countries TVET provision is fragmented and disconnected from labor market demands. The reforms described above—governance reforms which include employer engagement and aspirational employer-leadership; aspirational roles for employers in the development of qualifications and occupational standards; and models to involve employers in providing and directing funding for TVET, are all part of attempts to improve the labour market relevance of TVET. What is noticeable, however, is that despite lack of systematic evaluation of attempts to improve labour market relevance through reforms like competence-standards and qualification frameworks, which have been in place for some time in many countries, similar reforms are continually introduced.

Two other major reforms in this area are skills anticipation systems and the introduction of apprenticeship-type systems, discussed briefly below. This is followed by a discussion of some related issues—the ongoing stigma of TVET systems, and public works programmes as part of skills-related labour market systems.

In relation to skills anticipation systems or labour market intelligence systems, we were able to find some information on what countries are trying to do, sometimes described briefly in the ILO State of Skills reports, for the countries that have these, but little on their effectiveness. For example:

Some Member States like Malawi have not rolled out the Labour Market Information System (LMIS) and TVET Management Information System (TMIS) as tools to help generate data as well as track progress of TVET in the countries. (SADC secretariat, 2022)

Sometimes problems are noted, such as the State of Skills report for Cameroon, which notes that the definition, nomenclature and classification of occupations, as well as annual studies of the employability of TVET graduates, are not carried out on a systematic basis, with the result that the directory of jobs is never up-to-date, but is lapsed or even obsolete. Labour force analysis is complicated by poor data (Cramer, Sender and Oqubay, 2020), and often conducted using concepts from developed countries, even though the characteristics of labour markets and the institutions associated with them are very different (Ghose, 2003). The World Bank, UNESCO, and the ILO (2023) suggest that “more than one-third of L/MICs have no mechanism to systematically provide labor market information (e.g. job vacancies, occupations, skills in demand) to job seekers.”

In most countries, there are few tracer studies, and no specific systems for collecting statistical data on TVET. Where analysis has been done it seems that labour market returns

to formal TVET are often not better than, and sometimes worse than, those for high school graduates (Bhorat, Cassim and Tseng, 2016; Santos, Alonso Soto and Sosale, 2019). What is hard to sort out is the causality here—the low status of TVET, and fact that it usually serves students with weaker educational backgrounds, could reinforce poor quality, and therefore poor labour market outcomes, or the causality could run in the other direction. Certainly, TVET serves poorer learners, whose parents tend to have lower educational achievement. Santos, Alonso Soto, and Sosale (2019) point out that the weaker foundational skills of TVET students may reinforce poor labour market outcomes, as foundational skills are important in many workplaces. They suggest that even when labour market returns are initially comparable to general education, they decline over time, particularly relative to individuals with university qualifications, but nonetheless argue that for individuals who are unlikely to make it to university, TVET does, in some instances, have labour market value. They also point out that while TVET is generally seen as a second-rate choice for those with an academic aptitude, it can still be seen as promising for those less likely to succeed, or unlikely to make it to university.

Labour market intelligence systems are not clearly integrated with industrial development as part of decisions and mechanisms linked to industrial transformation, driven by employer associations/firms (Allais, 2022, 2023b). A metareview of TVET and skills development programmes finds that if they are to have greater impact, they need to be located within the context of broader economic changes (Independent Evaluation Group, 2013). A key finding is that it is only in combination with other public policies (like macroeconomic policy, industrial policy, and education policy) that employment policies are able to support job creation in the medium and long term.

It is also important to note that formal TVET provision is largely oriented to wage employment in very small formal sectors (Arias, Evans and Santos, 2019). The ADB (2020) notes that most TVET policy in Africa is very much ‘supply driven’, with weak linkages to economic demand. Billetoft (2016) points out that labour markets are typically disorganized and employer and employee organizations are weak, and therefore have weak mandates in governing bodies of TVET. Often, he argues, neither group have a qualified view on TVET, apart from general dissatisfaction with quality. And African labour markets are dominated by informality; around 85% of workers are estimated to be in informal employment by the ILO (ILO, 2018). Shares vary considerably by region: with 91-92% in Central Africa, East Africa, and West Africa, and only 40% in Southern Africa (ILO, 2018, p. 28). Participation in formal labour markets is strongly correlated to educational levels, and participation in informal labour markets rises with lower education levels. Some estimate that less than 20% of employment in low-income African countries is in a wage-paying job, even one that is largely casual or temporary.

As discussed in the section on provision above, there is considerable TVET provision for the informal sector, but this is also, mainly, informal (ILO, 2012). For example, in Kenya, the traditional ‘Jua Kali’ (‘hot sun’) sector is described as focusing on vocational skills that cannot ordinarily be acquired in mainstream education, and require specific training, and some studies describe TVET as informal learning (Haßler, Björn *et al.*, 2020). In other words, it is TVET to the extent that at some point, workers obtain some skills. Haßler, Björn *et al.* go on to argue that in most cases this ‘informal provision’ is based on loose agreements

(such as verbal agreements) between the skilled ('professionals') and those requiring skills ('apprentices').

With regards to the second issue, a problem mentioned consistently in relation to formal TVET provision is lack of practical experience. This could be linked to inflexible systems of provision which are difficult to combine with work (Johanson and Adams, 2004; Santos, Alonso Soto and Sosale, 2019). Public formal TVET is also seen to be outdated and out of touch with labour market needs (Billetoft, 2016). Santos, Alonso Soto, and Sosale (2019) argue that employers see lack of practical training as one of the main weaknesses of TVET in the regions, and they provide examples from Cameroon and Burkina Faso of programmes with extremely outdated facilities. So-called 'dual' TVET is described in some countries systems, and is seen as somewhat successful in some (for example, Ethiopia and Malawi), although with many criticisms.

A related issue is that TVET continues to be stigmatized in many African countries. McGrath *et al* (2019) point out that differences in contemporary provision systems may be linked to colonial legacies. For a more detailed historical overview see King (2020) and McGrath *et al* (2019), and see King and Palmer (2010) for an overview of the history of development aid and TVET which has considerable analysis of Africa. For now, one important point is that, as per King (2020), colonial regimes targeted specific groups of people for vocational education, introducing stigmatized systems from very early on.

In the 10 SADC Member States the majority of the youth enrolling in TVET programs are seen as academic underachievers. This view reinforces the negative perceptions and low valuation of TVET by the majority of the youths and parents. Stakeholders attending the regional TVET workshop in Malawi revealed that there are varied range of strategies that have been advanced in order to promote TVET in the Member States. (SADC secretariat, 2022)

There is little insight into where, if anywhere, there has been success in changing it, which could be something important to research.

Our analysis of 14 meta-reviews focuses on active labour market policies and programmes and the impact that these have on individual employment chances of programme participants across the African continent. Active labour market programmes typically include measures such as job-search assistance; vocational training; wage subsidies; public works schemes; and support for entrepreneurship. The metareviews highlights that active labour market programmes, and particularly technical vocational education and training and skills development programmes, are often posited as the solution to enabling young people to access the economy. However, the studies suggest that while programmes build confidence and a sense of work readiness, they are seldom successful at enabling large numbers of young people to enter and remain in employment. Studies suggest that this is even more so when these programmes take place in countries with high levels of unemployment. These findings therefore raise questions about the extent that TVET and skills development programmes are in fact able to support large numbers of unemployed individuals to access labour markets in contexts of small formal sector employment.

Yet, the studies highlight that despite the extent of the evidence about the limitations of these policies and programmes, policy-makers persist in making the same decisions about policies and practice in the hope that a new version of a particular policy will lead to a

different result. Where policy makers and development partners do ‘hear’ the evidence about the limitations of TVET and skills development in terms of the formal sector, they respond by suggesting the need to focus on the informal sector rather than continuing to focus exclusively on the formal wage sector. This shift takes place despite very little evidence from evaluations to suggest that skills interventions have value beyond for a small number of individuals.

One key finding worth highlighting from a metareview of skills interventions is that in high-unemployment environments (which is not the case in Africa, but rather high under-employment), wage subsidies, skills training, and job search support are of little impact; and demand-side interventions are needed (Independent Evaluation Group, 2013). The metareview of global interventions to support youth employment also emphasizes a ‘growing economy and a stable macroeconomic and political environment are fundamental conditions for job creation and employment for all age groups’ (Independent Evaluation Group, 2013, p. XX). Interventions that specifically target youth are less likely to be effective if these conditions are not in place.

A metareview conducted in South Africa (Graham, Patel and Leibbrandt, 2018) provides valuable commentary on the need for integrated programmes, emphasizing the importance of, for example, ensuring that business skills development and non-financial support services are an integral component of *entrepreneurship programmes*, especially those targeting youth, to strengthen skills development and training in *public employment programmes* as well as involve young people in more youth-relevant activities, to intensify the integration of technical, vocational and life skills training of these programmes in *second-chance programmes* and *youth service programmes* and other programmes targeted at youth. Another international review emphasizes that the type of active labour market programme that is appropriate will largely depend on the type of education and training system in place—in other words, much more emphasis on context, and the systems in which interventions are being made. Many interventions are designed in the global North, in countries where active labour market policies are limited to aiding the relatively small number of young people. In the global South, and particularly in sub-Saharan Africa, ‘disadvantaged’ youth is most youth, not small minorities—and this points to problems with targeting of programmes, and the extent to which metareviews are able to disaggregate.

Public works programmes are a part of social protection used by governments and international development agencies to support temporary employment, or, to sustain basic income on an ongoing basis, and often, incorporate training aspects (Bagga *et al.*, 2024). For example, Ismail (2018) notes that the “EPWP [expanded public works programme] in South Africa and the PSNP [Public Service National Programme] are examples of PWPs which anticipate that the participants will graduate out of poverty through obtaining skills and experience.

Sometimes public works programmes are seen as strengthening skills and providing capacity building by virtue of providing employment opportunities, with the assumption being that people need to be habituated to the requirements of employment. To-date, research shows that the majority of beneficiaries of public works programmes in sub-Saharan Africa come from relatively few countries. The largest programme is in Ethiopia, with large programmes also in South Africa, and large relative to population in Botswana. Public works programmes are not extensively researched but evidence of their effectiveness, or lack thereof, has been

gradually growing, often driven by donor agencies, and often through randomized-control trials or so-called experimental research. These studies have begun to provide some insight into the limited effects that public works programmes tend to have on labour markets, although they may play very valuable roles in sustaining basic survival. Research suggests that many of these programmes tend to be highly politicized and so tend to have unreasonable and unrealistic expectations, perhaps because by their nature public works programmes lend themselves to electioneering strategies.

Finally, some researchers point out that the greatest difficulty facing TVET systems is not lack of labour demand. Fox, Senbet and Simbanegavi (2016) describe the common situation in Africa as full-time employment with low earnings, often with considerable income variability, and widespread *underemployment*. Forced labour still happens in many countries. In other words, ‘the real issue is one of economic development rather than the efficiency of VET systems’ (McGrath *et al.*, 2019, p. 5).

Monitoring and evaluation systems

We attempted to find information on what monitoring mechanisms are in place for TVET, and what evaluative mechanisms or evaluations are available. According to a SADC report,

All the 10 SADC Member States have monitoring and evaluation systems which they are using to track progress and measure the impact of TVET on their economies. However, the M&E systems are not generating adequate data to inform and provide feedback to the entire TVET system. (SADC secretariat, 2022)

However, the SADC study concludes that

The biggest challenge in many SADC Member States is the availing of relevant and reliable data which may be used for informed policy formulation and decisions. Member States agree that more often, the monitoring and evaluation function of TVET systems are poorly funded, are poorly manned and not prioritized.

We found one recent report, from Ghana (Ministry of Education and CTVET, 2023), that provides an explicit evaluative overview of interventions in TVET. The report describes a policy review as well as tracer studies in 2018, 2019, and 2021. However, even here many achievements are described in terms of reforms achieved, as opposed to goals achieved. For example, the report states that large scale competency-based training has been implemented, but not whether this has actually led to labour market take up. The report does state that stakeholders are positive, and suggests that there is now a reliable database of TVET stakeholders (Training Providers, Trade Associations, Training Coordinators, Facilitators, Verifiers, Assessors, External Verifiers, Awarding Body) which can be accessed and updated anytime; whether or not this can provide better insight into policy achievements is something to be researched.

3.2. Limitations of the available data on TVET systems

The easiest thing to get information on is the policies that are in place. Beyond this, information can be obtained on governance structures and arrangements, and some information on provision systems (such as, number and types of institutions). What is very hard to get information on is enrollment numbers, throughput numbers, the relationship between vocational skills development at the rest of the education and training system

(except at the level of official maps of qualifications). Equally difficult is policy evaluation. We discuss these challenges briefly below.

Two organizations have produced short overviews of TVET systems in Africa: UNESCO and the African Union Development Agency (AUDA) through the African Skills Portal for Youth Employment and Entrepreneurship (<https://aspyee.org/>). UNEVOC overviews are available for all 48 countries and Aspyee profiles for 27 countries respectively. The ILO has 'State of Skills' overviews for 23 countries. These overviews provide some useful information but tend to get out of date quite fast. (URLs for these profiles are listed in worksheet 3 of *Appendix 02: Overview of*.) Besides the reality that these briefs seem to quickly get out of date, they also can be frustrating to read because they give little insight into what is actually happening and instead focus on policies.

Some of the reviews of African TVET systems list policies, as do many of the short country overviews. These lists, as well as other data sets, allow for an analysis of the number of countries that have developed and enacted policies and laws to improve TVET systems over the past 20 odd years, and some for other aspects of vocational skills development.

In general, these reviews do not provide information on economic development, industrial policy, and so on, and where such policies are available from country websites, they don't seem linked to policies on education in general, or vocational skills development in specific. Some exceptions for employment policies, some of which emphasize vocational education, particularly in relation to public works programmes, which are discussed later in this report.

There are, in many countries, some official government reports on the implementation of TVET reforms, and information about enrollments and completion in formal TVET programmes. More easily found are reports from donor and development agencies. There are also reports of regional and continental agencies like the African Union, the regional economic development communities, and so on. Some of these contain information about systems, or aspects of policy relevant to TVET and skills, or analysis of specific interventions.

We found some information about the types of institution and significance of type, but at a document review level could not get insight into autonomy of curricula and provision, how general education and vocational specialization is balanced, and the relationship between institutional learning and on-the-job training.

We also could not easily get information about numbers of different types of institution; different types of programmes (including contact/ distance/ apprenticeship etc); whether or not the country has a formal or informal apprenticeship system; the nature of assessment systems; information about nonformal provision; how formal TVET provision interacts with other forms of workforce training (systems to coordinate the interaction and to enable it through funding) and what programmes exist to support this interaction; information about work integrated learning; which institutions are responsible for the design of curricula and their systems. Information on private provision is even more patchy than formal public provision (McGrath *et al.*, 2019).

Enrolment and completion data was very difficult to find, even in relation to how many people attend formal TVET (we looked for information about enrolment and completion, where possible by programme type) as well as numbers in non-formal and on-the-job

training. Tracer studies are infrequent. Some governments (Ghana, Ethiopia, South Africa) have fairly systematic reports with some of this data. But even in these cases, when we dug deeper we found significant problems. For example, in South Africa, consider the following picture of TVET data:

- a public regulatory institution, the Quality Council for Trades and Occupations, has learner completion data for learners registered for their qualifications. But they are unable to make any analysis of uptake, throughput, or enrollment, because the education providers don't supply them systematically or regularly with this data. For completion data, they have a hold over providers because of the power to issue certificates—so providers must submit this data.
- Then, the Sectoral Education and Training Authorities, South Africa's sectoral skills bodies, only keep learner information for learners on programmes that they fund. This means they have no coherent data on the amount of training that is taking place in their sector, as well as the value for money in their investments, relative to the rest of the sector; they can only analyze individual programmes.
- South Africa has a National Learner Records' Database, but again, this only contains data on qualifications or part qualifications that students have obtained.
- The South African government department in charge of TVET only keeps records of students in public TVET colleges, against the qualifications that they fund. The mix of qualifications is extremely complex and shifting, and the funding models are equally so (Allais, 2025).
- None of this data relates coherently to the various, and also problematic, ways in which demand data is gathered in South Africa (Allais and Ngcwangu, 2025).

The consistent reforms discussed above—change to configurations, qualifications, introduction of quality assurance, and so on—make the data picture even more murky. There is little indication of research or analysis or even basic data collection to assess the effectiveness of reconfigurations and reforms. A World Bank, UNESCO, and ILO study notes a lack of evidence and data for decision-making on TVET systems in low- and middle-income countries resulting in decisions 'based on conjecture', suggesting that 'TVET systems in L/MICs are largely operating in the dark, with data scarce and the evidence base limited, particularly in comparison with other parts of the education system' (2023). The paper claims that 'there is simply no strong evidence to guide policymakers one way or another', and that 'there are only a few rigorous impact evaluations and more numerous observational studies of formal secondary TVET in L/MICs'. A report UNESCO, IIEP, and IFEF report (2020) notes that there is a lack of tools that enable measurement of TVET system reforms: 'In a context where research into employment is rare, irregular, and reliant on specifically mobilized funding, the creation, structure and organization of data collection tools and the participation of stakeholders in workplace integration monitoring systems are starting to develop on the African continent. These tools remain sporadic however, and the results in terms of worker integration are rarely shared.' Haßler, Björn *et al* (2020) similarly point out that the:

... impact of TVET on developmental processes, i.e., development impact, is often inadequately researched and, unfortunately, of limited validity. In particular, the evaluation of the impact of specific TVET programmes is limited. Deficiencies

affecting the internal and external validity of the results are due to the low sample sizes and the failure to control statistically important variables. Often, only one-off surveys are carried out, using purely qualitative methods that rely only on self-reported data without triangulation. Studies with higher quality Technical and Vocational Education and Training in Sub-Saharan Africa designs produce diverse insights into the impact of the programmes. Although some successful results have been documented, this is far from being the case for all projects.

3.3. What can – and can't – current evaluations tell us about TVET in the continent

The methodology for this analysis is described in section 2 above, and a detailed report, including an overview of all evaluations found, is contained in *Appendix 04: Overview of interventions and projects*. In total, 51 evaluations were examined in the search, of which 7 were multi-country / regional evaluations, and 44 were from 16 individual countries in sub-Saharan Africa. Importantly, no evaluations were found for the remaining 31 countries. 24 of the evaluations followed an experimental methodology (quasi-experimental or randomized controlled trial), and 27 a non-experimental methodology.

Findings from evaluations

Scope of evaluations: A pattern across the multi-country evaluations is that most evaluations looked at systemic outcomes. However, the aim was in general to ascertain whether the project achieved its intended systemic objectives, rather than conducting a more expansive assessment of indirect or spillover effects, or effects on the wider labour market or skills systems.

In contrast to this, the vast majority of evaluations at the country-level (both experimental and non-experimental), were project focused, assessing the impact of interventions on direct beneficiaries/institutions targeted by the project. Only two evaluations looked at the impact on unintended beneficiaries or spill-over effects to non-participants.

There were only four evaluations that attempted to examine the wider changes in the labour market. One evaluation included an examination of changes in the labour force participation rate and employment rate for the country; another assessed the contribution to the local private sector and the contribution towards the availability of cost-effective skilled labour in the market. Two evaluations included the knock-on employment effects of their projects, such as whether trained entrepreneurs or project beneficiaries were able to employ additional non-beneficiaries of the project. A caveat is that in two of the evaluations, evaluators noted that it was challenging to make a well-evidenced assessment of the project contributions to the wider labour market due to a lack of monitoring and evaluation data collected by project teams.

Around 9 evaluations attempted to assess the systemic impact of their project, however for just under half of these evaluations, it is not always clear if the method of assessing impact is rigorous or sound (or at least not based on empirical evidence). For example, one evaluation stated that the systemic outcomes were *likely* to result from the project activities. One evaluation 'measured' the contribution to systemic outcomes through conversations with stakeholders, and another measured through a survey question to project beneficiaries. Another evaluation claimed it was assessing systemic outcomes, however, it was not made clear how the project actually contributed towards those outcomes.

Just over a quarter of evaluations assessed the impact on the institutions targeted by the projects. The outcomes evaluated were varied, however, there were a few themes that emerged. Around four evaluations measured changes for firms, for example, impacts on profits or sales, or improvements in business practices. A similar number of evaluations measured changes to the quality of, or access to, TVET institutions, such as improving pedagogy or lecturer skills, or the relevance of the courses to industry. A couple of evaluations also measured the impact on public-private-partnerships or collaboration between organisations, and one evaluation looked at the changes to gender responsive programming and reporting at participating institutions.

Outcomes evaluated: Individual labour market outcomes were assessed by almost all of the evaluations (and certainly appeared to be the priority for evaluations following experimental methodology). Around half of the evaluations considered individual non-labour market outcomes. As mentioned, just over a quarter of evaluations examined institutional outcomes, with the majority of these coming from evaluations following a non-experimental methodology. As mentioned above, very few evaluations focused on wider labour market outcomes: under a quarter of the multi-country/regional evaluations focused on systemic outcomes, and only a handful of individual country evaluations considered systemic outcomes. The majority of evaluations assessing systemic outcomes coming from non-experimental evaluations.

Methodological limitations: A significant number of evaluations reported challenges related to data availability, data collection, and data quality. This tended to relate to a lack of documentation or poor data collection by the project teams, some examples being a lack of monitoring and evaluation data or a lack of disaggregated data. Another example related to difficulties obtaining accurate or representative contact data for beneficiaries which created challenges in contacting and surveying these stakeholders.

Common methodological issues identified by the evaluations included difficulties in arranging interviews due to stakeholders' availability, low response rates to surveys, and only being able to cover a limited number of countries for multi-country projects. These affected around half of the evaluations. A few of the evaluations were affected by the implications of the COVID-19 pandemic which necessitated virtual data collection. A few evaluation reports raise concerns about the objectivity of stakeholders interviewed, where the project team, rather than the evaluators, selected the key informant interview or focus group participants.

Research gaps: At a multi-country level, with one exception, none of the evaluations explicitly identified research gaps. The evaluation that covered these gaps, critiqued the monitoring and evaluation systems of the evaluated projects, highlighting the absence of external validation and missed opportunities to involve local research organizations and universities in assessing the broader socio-economic impact of the interventions.

At a national level a similar picture emerged and non-experimental evaluations rarely specified research gaps. Most of the research gaps were identified by the experimental studies, however, these gaps tended to relate to gaps in the literature or evidence base specifically related to the subject matter of their study, as opposed to a comprehensive outline of gaps in the literature for skills systems or the TVET sector. As a result, there did not appear to be too many broadly applicable themes, however the following gaps were each highlighted by a handful of studies (and for most of them, the study at hand aimed to

contribute towards addressing the gap through their current study). One such gap was a failure by impact assessments to measure the long-term impact of skills interventions such as the post-programme effects over an extended period. Another gap was that evaluations seldom examine the effects of skills training on non-employment outcomes such as effects on mental health, social networks and gender-related issues. There was also a theme around a lack of comparative research comparing different skills training approaches such as classroom-based TVET vs apprenticeships. Evaluations also noted that research is often focused on individual outcomes, with little attention given to the impact of interventions on businesses, TVET institutions or wider labour market dynamics (this reflects findings from the analysis around the types of outcomes evaluated by these studies.)

An interesting phenomenon from some of the evaluations is that the project objectives tend to imply that the project is aiming to have a systemic impact or an impact on the wider labour market. However, the outcomes evaluated do not tend to attempt to measure such systemic change or any wider economic impacts and rather focus on the direct impact on the participants or institutions targeted by the project. On occasion, this is because they rely on project-level indicators reported by the project team – some of which only report on project outputs or activities.

Summary

In conducting this overview, we wanted to get a sense of if there are evaluations of skills and TVET interventions, what they focus on, and what they do not focus on. In the main, we find agencies and organizations focused on their own programmes, which may be localized and small scale, or, systemic but hard to evaluate. There is a very limited picture about what is happening in the countries, and the institutional and systemic outcomes—we don't get a sense, for example, of if interventions leave providers in a better position. Lack of effective data systems, effective tracer studies, and ability to reach participants and stakeholders come up as frequent problems. It seems that while there is an increase in experimental evaluations of skills training programmes, they don't provide insight into what aspect of the intervention improves individual labour market outcomes, and the impact of programmes on labour markets in general—which could mean that if individuals get jobs, they are simply displacing those who would have been employed in the absence of the intervention.

We also found, in an overview of interventions across the continent, that many do not have evaluations—or, at least, publicly available evaluations, or external evaluations.

3.4. The limitations of the academic research literature and capacity

The research base shows little accumulation of knowledge, with a few exceptions. As pointed out in the German meta-review, TVET research in sub-Saharan Africa is not, on the whole, systematic or large scale (Haßler, Björn *et al.*, 2020). This review itself missed out on a number of key publications and research reports, and the reason seems to be because of a predominantly key-word approach to the task, as opposed to approaching it conceptually. Some recent publications, such as a literature review by McGrath *et al* (2019) shows a positive direction of a more cumulative approach to knowledge-building.

As discussed in the methodology section, we looked for research in three different ways: first, based on our knowledge of the field as researchers in it for many years; second, a

keyword search through google scholar; and third, an analysis of papers covering African countries in leading journals that publish on TVET and skills and development. It is notable that not all of the journals from the last group came up through the keyword search, and, the keyword search produced a wide range of journals that have little coherent focus on vocational education or even education, and many which may be predatory journals. This dispersion may indicate the nascent stage of research in this field, suggesting that increased maturity could lead to greater consolidation within a smaller set of specialized journals.

An observation of particular interest is the limited representation of research originating from Francophone Africa. While efforts were made to include Francophone and Lusophone articles in the search strategy, this potential underrepresentation may be partially attributable to language barriers encountered during the data collection process. Nevertheless, the data suggests a relative scarcity of published research from these regions. Benin, ranked 13th overall in publication volume, exhibits the strongest representation from Francophone Africa within the dataset.

The data in *Appendix 01: Overview of research papers* provides an overview of the second two methods. We believe it is a useful resource for researchers, but not a systematic basis for analysis of TVET and skills; we argue that the synthesis above, which draws more broadly on insights into the conundrums of skills, education, and economic development, provides better openings for future research because it treats the topic in a holistic and integrated matter. We return to this key point in the analysis section below.

It is also interesting to contrast the research gaps and methodological limitations identified by the evaluations with those identified in systematic reviews, meta-analyses and research reports on the region. However, it must be noted that several of the identified research reports had a wider scope than sub-Saharan Africa. Some covered the entire continent, and a few looked at developing countries, or low- and middle-income countries. In terms of reviews of TVET research, quite a few studies did not explicitly mention methodological limitations, nevertheless, there were a few themes that arose. These included difficulties in comparing results (and subsequently drawing insights) across different TVET evaluations which was usually due to inconsistent research designs or definitions. A couple of studies also noted that their findings were not likely to be reflective of all TVET / skills training interventions as they focused only on a subset of the literature/evaluations, such as only experimental evaluations or information available on the internet. The World Bank, UNESCO, and ILO (2023) note that there is underinvestment by development partners in ‘generating the evidence necessary for more informed policies nationally and globally through more rigorous monitoring and evaluation.’

One of the most prominent themes across the reports is that there is limited rigorous evidence or credible research into the impact of TVET and skills training interventions in the region. This is especially true for the intermediate and long-term impacts of interventions. A few studies noted that where research and evaluations are undertaken, there are often methodological challenges that impact the applicability of the studies for use in policy decision-making. Some studies also mention a lack of research into the non-labour market effects, such as psychosocial and well-being effects of training interventions. Another theme relates to a weak understanding of the linkages between TVET and skills interventions, and the actual skills demanded by industry or employers. This includes little evidence on how to better align TVET with industry needs. There was also mention that

there is limited evidence on the cost-effectiveness of TVET and skills interventions as few studies conduct rigorous cost-benefit analyses.

We also attempted to determine, based on the literature searches and analysis of journal back editions, which universities, researchers, and research institutes are actively engaged in this field, along with the specific projects they are undertaking. This is something also attempted by Haßler, Björn *et al* (2020), who concluded that,

Few TVET research activities are being carried out in the majority of the 10 Member States due to limited research capacity of teachers, limited financial resources and poor research infrastructure amongst the challenges identified. Realizing the existing research gap in the TVET system, several Member States like Malawi, Zambia, Zimbabwe, South Africa, Mauritius have prioritized research in their TVET policies. In Member States like South Africa, Malawi, Mauritius, Botswana and Zimbabwe, the TVET providers are collaborating with universities and institutions of higher learning to carry out collaborative research. (SADC secretariat, 2022)

Those challenges most frequently centred around the shortage of funding that could support the local knowledge production appropriately, in all of the participants' countries of origin. Participants reported that governments usually allocate some budget for research but that this budget is insufficient; research in TVET is generally seen as a neglected area. As a result, sub-Saharan African researchers rely heavily on international funding and cooperation to be able to carry out research projects or to broaden the scope or depth of their studies. However, the overall lack of funding affects the availability of appropriate equipment, researchers' salaries, conference attendance (knowledge and experience sharing), as well as the number and scope of studies that can be carried out. Beyond funding limitations, a lack of clear leadership was another challenging condition raised with regard to institutional frameworks. Gabriel Konayuma of the Ministry of Higher Education in Zambia, for example, noted that what is holding TVET research back in Zambia is the lack of an agency or institution that clearly and authoritatively drives the TVET research agenda

They particularly noted the challenges associated with unfavourable institutional framework conditions and research capacities, as well as how those challenges might be addressed. Currently, the main challenge is insufficient funds for conducting research; funding limitations are related to an inability to provide competitive salaries to highly-skilled researchers and appropriate equipment for research and conference attendance sponsorship. Other challenges are a lack of clear institutional leadership surrounding the TVET research agenda, as well as insufficient regard for the importance of research. Skills shortage in the region is an issue, specifically, a shortage of quantitative research skill expertise, and expertise in working with large datasets.

4. CONCLUSION

This report, together with the four appendices, provides an overview and analysis of the state of research and interventions into TVET and skills in sub-Saharan Africa. It recommends key priority areas of research as well as approaches to building research capacity on the continent. Africa is the youngest and poorest continent, and a continent in which TVET and skills systems have proved intractable to change, and many skills

interventions have limited effects. It is hoped that building better insight into skill formation systems and into the logic of how change happens and flowing from these points, how best to build and support them will contribute to the strengthening of vocational skills programmes for youth to access labour markets and sustainable livelihoods, in the context of the changing world of work related to digitalization and the transition away from carbon-based economies.

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Appendix 01: Overview of research papers

Appendix 02: Overview of evaluative studies

Appendix 03: Overview of systems and policies

Appendix 04: Overview of interventions and projects